# SPENCER GREENWAY TRAIL
# & UNLV CAMPUS BIKE PLAN

## FINAL REPORT

JANUARY 2017

PARSONS

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RTC

# SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

UPWP TASK CONTRACT NO. 16-045: SPENCER GREENWAY TRANSPORTATION TRAIL AND UNLV CAMPUS BIKE PLAN

*Submitted to:*

Regional Transportation Commission of Southern Nevada

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*Submitted by:*

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SPENCER GREENWAY TRAIL
& UNLV CAMPUS BIKE PLAN

# EXECUTIVE SUMMARY

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## ES.1 INTRODUCTION

### Project Background

Previous regional and local planning studies have identified a significant need to provide pedestrian and bicycle improvements and other community amenities between Downtown Las Vegas and the University of Nevada Las Vegas (UNLV) Main Campus on Maryland Parkway. During outreach meetings for the Southern Nevada Strong (SNS) Regional Plan, the NV Energy-owned "Spencer Utility Corridor", which runs approximately 2.5 miles adjacent to discontinuous segments of Spencer Street about a half mile east of Maryland Parkway, was identified by the community as an opportunity to improve the experience and safety of pedestrians and bicyclists in the area. After a Preliminary Feasibility Study was completed by stakeholders, a Phase 2 study proposal was submitted by the City of Las Vegas Planning Department as a candidate for funding under the RTC's Fiscal Year 2016 Unified Planning Work Program (UPWP).

The UNLV Parking and Transportation Services Department also submitted a UPWP proposal to participate in a regional bicycle trail/corridor plan that addresses the connectivity of bicycle routes and trails to the UNLV campuses, establishes on-campus bicycle routes that connect to other areas off campus, and provides safe and effective storage for bicycles while they are on the campus. In light of the limited funding for UPWP studies and to avoid duplication with other ongoing regional and local studies, the RTC determined that UNLV's proposal would be combined with the City's proposal into a joint planning document focusing on a downsized study area between Downtown Las Vegas and the UNLV Main Campus.

### Study Approach

The scope of work includes developing conceptual plans for a multi-use trail and associated amenities on the NV-Energy owned utility corridor adjacent to Spencer Street as well as develop a bike plan for the UNLV Main Campus on Maryland Parkway. The scope of work accomplished in this study was developed over a one year period. Below is a general outline of study tasks that were undertaken to achieve the goals described in this section:

- Task 1: Project Management
- Task 2: Agency and Community Engagement
- Task 3: Review of Related Studies
- Task 4: Conceptual Planning and Design
- Task 5: Preparation and Circulation of Document

### Summary of Agency and Community Engagement

A Stakeholder Advisory Committee (SAC) was created consisting of partner agencies including City of Las Vegas, Clark County, NV Energy, UNLV and other stakeholders to guide study development. Five SAC meeting were held over the duration of the project. The RTC set up a project webpage with regular updates on the project that the public could access and comment on at any time. Additionally, the following community outreach tasks were completed to solicit feedback and guide development of concepts for both projects.

- Outreach Specific to the Spencer Greenway Trail
- Bilingual Community Engagement Plan
- Outreach Specific to the UNLV Campus Bike Plan
- General Bicycle and Pedestrian Outreach

The project involved two Initial Public Meetings and two Final Public Meetings. The public meetings were held in an open house format. The project team also set up a table at the UNLV Festival of communities on April 16, 2016. This is an annual multicultural celebration organized by students which typically attracts over 7,000 people.

Figure 1: Public Outreach at The Boulevard Mall

## Survey Results Highlights

A Spanish and English on-line survey was created to determine the level of interest for the projects and solicit feedback on priorities and the elements desired for the projects. Nearly 1,000 total responses were received from the community. 280 responses were received directly as a result of engaging UNLV students as part of the campus outreach. The two most significant results of the survey demonstrated the following:

1. Strong support and interest for a Spencer Trail.

   **90% of those surveyed agree a walking and biking trail connecting downtown and UNLV along the Spencer utility corridor would bring benefits to the community:**

2. Strong indication that the UNLV Bike Plan will increase cycling on campus.

   **More than 70% of those surveyed said if UNLV provided secure and convenient bike parking on campus, this would this increase their interest in riding a bike to UNLV.**

## ES.2 SPENCER GREENWAY TRAIL

Section 2 of this report discusses the Spencer Greenway Trail project. The corridor includes four NV Energy transmission lines and two substations. The 100-foot wide corridor is located adjacent to many neighborhoods, schools, and churches and is used informally for walking in some unfenced areas. The corridor provides an opportunity to develop a paved trail with recreation enhancements and public art. Transforming this utility corridor would have many benefits, such as:

- Implements Regional and Local Plans
- Provides Intermodal Connectivity
- Increases Park and Recreation Access
- Provides Connectivity to Schools
- Revitalizes and Beautifies Neighborhood

Figure 2: Existing Conditions Photo

## Design Standards

The proposed trail system primarily consists of a 15-footmulti-use paved asphalt path along the utility corridor. It also includes some sidewalk and on-street alternative connections. Section 2 of the report discusses these various types of facilities and their general design standards in more detail.

## Crime and Safety

After the project team conducted the first round of outreach efforts, it was evident that concerns with crime and safety were one of the top issues. It will be important to address these issues so users feel safe along the trail. Some methods for addressing these include:

- Cameras and Emergency Call Boxes
- Crime Prevention through Environmental Design (CPTED)
- Neighborhood, Volunteer and/or Las Vegas Metropolitan Police patrols

CPTED is the design, maintenance, and use of the environment in order to reduce both the occurrence and fear of crime. CPTED involves the balanced application of these four principles:

- Natural Surveillance
- Natural Access Control
- Territoriality
- Maintenance & Activity

## Local Case Studies

The project team reviewed five local trail projects that are also constructed along utility corridors or flood control facilities. Section 2 of the report highlights photos, trail ownership, path type, amenities and other features of each of these projects.

## NV Energy Design Considerations

Any improvements within the Spencer utility corridor are subject to the NV Energy Lands Right-of-way Management and Transmission

Engineering Uniform Standards. While the standards indicate that trails are not permitted where NV Energy owns the land, NV Energy staff have indicated that exceptions may be granted for community-led projects. Development within or adjacent to transmission corridors require a case-by-case review. With the proper authorization NV Energy transmission corridors may be utilized for the following secondary uses:

- General Parking of operational vehicles not exceeding 8' in height. Non-operational vehicles and trailers are not allowed.
- Driveways
- Passive recreational parks
- Open space/wildlife corridors
- Biking and walking, trails within existing ROWs
- Free standing signs

**Undergrounding or Consolidating Power Lines**

The NV Energy facilities for this project include two distribution lines along the outside of the corridor and two transmission lines along the inside. The proposed trail concepts work without the relocation of utility poles. Relocating the existing power lines underground would allow greater flexibility in the design of trail improvements while also improving the aesthetics of the corridor. However, preliminary estimates indicate the cost to underground all power lines within the 2.5 mile corridor would be around $50 to $60 million. Another approach discussed with NV Energy that is less costly and more feasible is the option to consolidate poles. A conservative planning level cost estimate to complete consolidation for the entire corridor was provided by NV Energy in Appendix 2B. These costs may be reduced depending on variations of the methods implemented, however an engineering study will need to be completed by NV Energy to provide detailed information for alternative approaches.

Figure 3: Newly Placed NV Energy Transmission Pole

## Land Ownership

The majority of the proposed trail would run along the NV Energy utility corridor. Land in the corridor between Charleston Boulevard and Twain Avenue is owned by NV Energy, except for lateral street easements located within public right-of-way owned by Clark County and the City of Las Vegas. Easements exist for parking lots and flood control have also been granted within the utility corridor. NV Energy staff is reviewing ownership of parcels along their corridor and will provide any missing information as the project goes into design.

## Conceptual Plans and Alternatives

### Proposed Names, Logos and Themes

Based on research and discussions with the stakeholders, the public and the design team, a number of names, logos and themes were developed for the project. The initial inspiration for the logo stemmed from a desire to create a minimal visual with a clean aesthetic – one that allowed it to be easily read and identified.

Figure 4: One of Several Logos Developed for the Project

Three separate themes were also identified for the trail:

- PLAYFUL+WHIMSICAL.
- SHADE+SHADOW
- BEACON+PILLAR

These branding themes are provided as starting points for all wayfinding and visual opportunities throughout the physical space of the trail as well as the associated marketing materials.

The trail names, logos and themes proposed for the project were presented to stakeholders and the community for feedback during the second round of outreach. Final development and selection of these items will occur when the project moves to full design.

## Art Opportunities

Public art has an opportunity to become a large component of the proposed trail, offering opportunities for community engagement and aesthetic enhancements. Through a process of ideation and exploration, multiple types of artwork were curated for the length of the corridor, based on strategic opportunities. These concepts were presented to stakeholders for review and refined through team input, resulting in a set of various art types that has the ability to create a diverse experience and establishing a positive contributing factor in the success of the project:

- Parkway – 'Branding' Large Areas (for example, with painted concrete surfaces)
- Wall Art – Large Walls as Art Canvas
- Electrical – Decorated utility boxes and educational art
- Activities – Play & Fitness as Art
- Community – Low Cost but High Impact
- Crossings – Art to Slow Down Traffic
- Bike Amenities – As Art
- Shade – As Art
- Street Amenities – As Art

Figure 5: Example of Electrical Art Opportunity for the Project

## Trailheads

It's important for trails to have identifiable entrance points with information about the trail route and rules. The concept plan identifies major trailhead locations and trail access points or minor trailheads and shows two concepts in Section 2 of this report. Potential trailheads have been identified for the project at the following locations:

- South end - Orr Middle School (**preferred**)
- Cherokee Lane (Thomas Elementary School)
- Griffith United Methodist Church / Griffith Community Center
- Crestwood Elementary School
- North end - Charleston / Wells Fargo (**preferred**)

Trail Access Points are typically "neighborhood connection points" where streets intersect the trail and allow for access to the trail.

Figure 6: Example Trail Access Point for Pittman Wash Trail

## Conceptual Maps and Renderings

Conceptual maps, alternative matrices, and renderings have been prepared for the project limits and are included in Section 2

### *UNLV Connection Alternatives*

The project team evaluated a variety of options for connecting the south end of the Spencer Trail to the UNLV Campus. Section 2 shows the five alternatives evaluated for a connection between the trail and UNLV. The preferred near term alternative selected is the connection continuing south on Spencer Street and heading east on Harmon (A4/A6). This connection provides a lower cost, on-street connection for bikes and sidewalk connection for pedestrians. The arrival point on campus corresponds to the main entrance location at Harmon and Maryland Parkway. The ultimate long-term alternative would be to construct the trail along the Flamingo Wash so that the trail continues on a largely off-street path to the UNLV campus.

## Trail Conceptual Plan Sheets and Alternatives

Section 2 includes detailed plan sheets for the remaining length of the project north to Charleston Boulevard. Various planning level elements are included to guide the design such as the alignment of a 15-foot wide asphalt path and alternative connections, trailhead locations, general landscaping, art opportunities, bike facilities, pedestrian crossing improvements and other design considerations. Alternative matrices are then included to highlight characteristics of each and conclusions based on pros and cons and stakeholder feedback. The project team and Stakeholder Advisory Committee

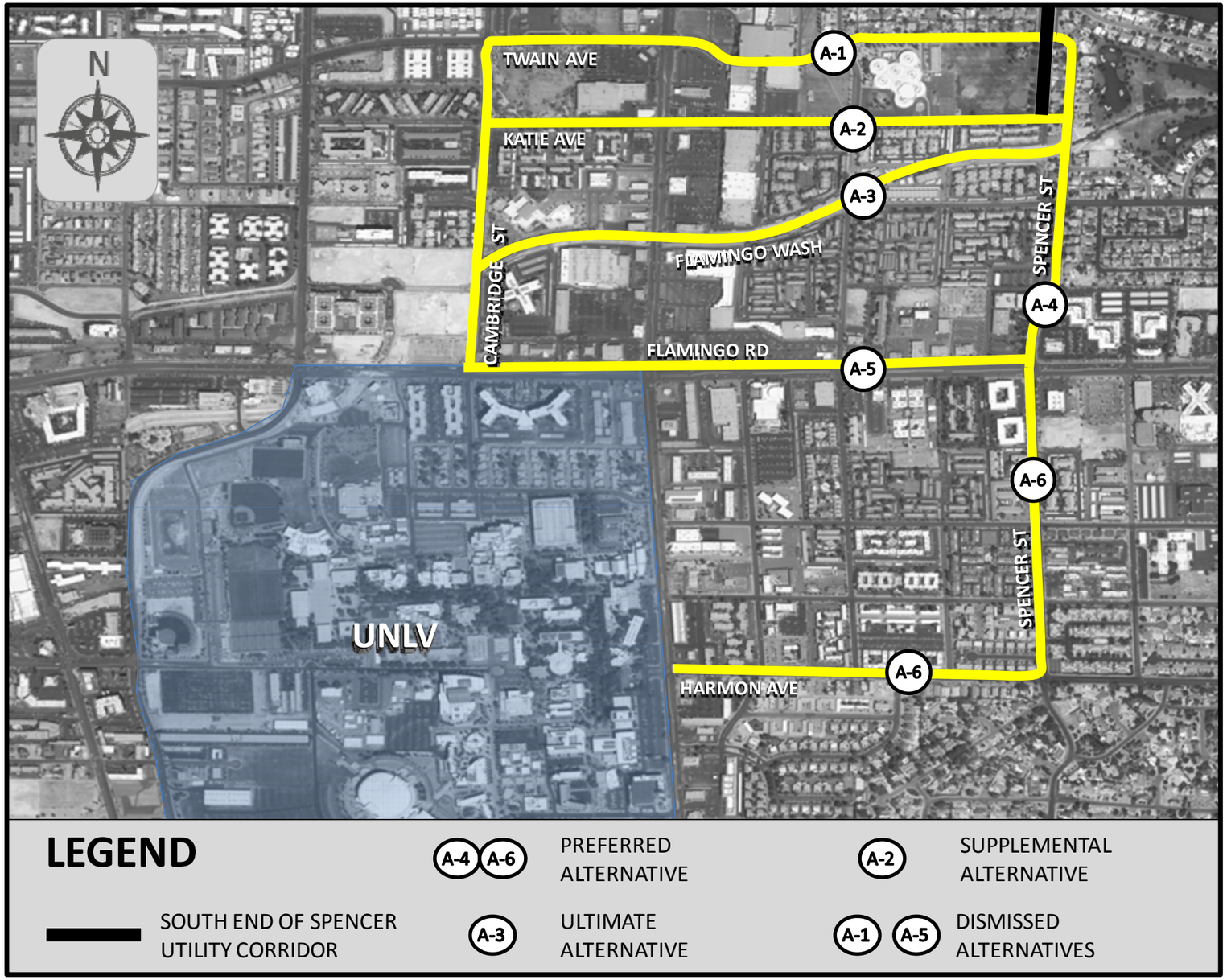



Figure 7: Map of UNLV and Spencer Trail Connection Alternatives

agreed that asphalt would be used for the trail surface for a number of reasons. However, concrete may still be used where needed, such as locations where structural integrity is important or locations where colored concrete is desired for aesthetics. A comprehensive landscaping plan is not part of the current scope, but will be recommended for the design phase.

Figure 8 on the next page includes a trail visualization for a perspective view. The location for this visualization is just south of Desert Inn in the Paradise palms neighborhood. This is an example of a “trail access point” and demonstrates some of the elements that could be included. The visualization presents a conceptual consolidation of utility poles, but further coordination with NV Energy is required to confirm the actual opportunities and configurations that will be possible at this location.

## Implementation

During coordination of this study, City of Las Vegas and Clark County staff agreed to leading the design, construction and maintenance of the trail within their jurisdictions, however, this is dependent on funding availability and acceptable agreements being in place.

Both the County and the City are well equipped for implementation of trail systems in their jurisdictions as they have successfully demonstrated. The next steps for these agencies to take for implementation of this project include:

- Updating agency trail maps to include the Spencer Trail so it is included in programming
- Formalizing agreements
- Identifying funding and project phasing
- Completing design, which should include detailed cost estimates and comprehensive landscaping, wayfinding, and lighting plans. Also completing environmental clearances if federal funds are used for the project.
- Construction
- Operation and Maintenance

Estimated cost for the project will vary greatly depending on the elements selected for inclusion. Some of the most significant costs on some trails are due to mitigating difficult terrain, pedestrian grade-separated structures, and obtaining right-of-way. These are relatively low impacts for this project, however, other items such as including an expanded trail width (greater than the minimum recommended), trailheads, landscaping, lighting and power pole undergrounding and/or consolidation would increase costs significantly.

The project has been conceptually designed to work without any changes to the current utility infrastructure, such as utility poles and substations. A planning level estimate shows the cost for this option may range between $2 and $5 million (See Appendix 2C for more detail). Preliminary estimates indicate the cost to underground all power lines within the 2.5 mile corridor would be around $50 to $60 million. Another approach discussed with NV Energy that is less costly and more feasible is the option to consolidate poles, as discussed earlier in this report.

Stakeholders may seek funding from the following potential sources:

- Southern Nevada Public Land Management Act (SNPLMA).
- RTC/City of Las Vegas/ Clark County Partnership – joint Federal Grant application. Federal funds (Transportation Alternatives Program (TAP), Fixing America's Surface Transportation Act or "FAST Act", Recreational Trails Program, Congestion Mitigation and Air Quality Improvement Program)
- Agency funding for streets and crossings within their jurisdictions
- Sponsorship opportunities, for example from local businesses
- Non-Profit Organization, Charity and/or Community Groups
- NV Energy Foundation

The purpose of this report is to provide a conceptual plan that highlights base information from which local jurisdictions may choose to take the next steps towards implementation. Through an extensive outreach effort, the study also demonstrated there is exceptional public support for the project. The proposed Spencer Trail provides a great prospect for key partnerships and an outstanding opportunity to transform an existing barren utility corridor into a beautiful legacy project that will be thoroughly enjoyed by the communities of Southern Nevada.

Figure 8: Trail Visualization – Perspective View

## ES.3 UNLV CAMPUS BIKE PLAN

### Introduction

Community outreach strongly demonstrated that implementation of the bike plan will increase bike riding directly on campus as well as encourage more people to ride bikes when traveling to campus from outside origins. Encouraging campus commuters to ride bikes instead of driving cars will help reduce increasing pressure on vehicle parking lots and garages, where space is limited.

Figure 9: Parking Challenge On and Around UNLV Campus

The following steps outline the overall plan development process included in this study.

1. Identify existing conditions and facilities already being proposed by other projects on and adjacent to campus.
2. Conduct community outreach and survey to identify desire for improvements, types of improvements, and locations for improvements.
3. Review bike plans implemented by other universities and highlight best practices.
4. Prioritize entry points of campus and destinations on campus.
5. Propose routes to create a network connecting those origins and destinations.
6. Propose amenities to support the network.
7. Outline next steps for implementation and success.

### Plan Development Process

#### Existing Conditions

The University of Nevada, Las Vegas (UNLV) is a public university of almost 30,000 students located in the Las Vegas suburb of Paradise, Nevada. The 332-acre campus is located approximately 1.5 miles east of the Las Vegas Strip. The main campus is generally located within the boundaries created by Flamingo Road, Maryland Parkway, Tropicana Avenue and Swenson Street. UNLV also includes a Shadow Lane Campus located to the north, however, this study will focus only on the main campus. At the start of the study, the project team reviewed the area and identified:

- Bike and Transit Connections
- Existing Bike Routes and Bike Parking

Figure 10: Typical Busy Corridor on UNLV Campus

#### Successful Bike Plans by Other Universities

Although improved facilities will go a long way, a successful campus bike plan is about much more than just infrastructure. One common characteristic among all of the most successful campus bike plans was the effort to achieve a Bicycle Friendly University status with the League of American Bicyclists. The League identifies "The 5 E's as the essential elements of a bicycle friendly America:

- Engineering: Creating safe and convenient places to ride and park
- Education: Giving people of all ages and abilities the skills and confidence to ride
- Encouragement: Creating a strong bike culture that welcomes and celebrates bicycling
- Enforcement: Ensuring safe roads for all users

- Evaluation & Planning: Planning for bicycling as a safe and viable transportation option

Currently, there are five Platinum-level Bicycle Friendly Universities in the U.S.:

- Stanford University
- University of California, Davis
- Colorado State University
- University of Minnesota, Twin Cities
- Portland State University

The project team reviewed these and several other notable university campus bike plans as case studies. Section 3 highlights some of their keys approaches for success.

Figure 11: Colorado State University Separated Bicycle Path

## Prioritize Origins and Destinations

Before identifying routes for improvement within campus, it is important to understand the primary origins (or entry points) and destinations.

### *Primary Points of Entry*

The primary points of entry were determined by two general methods. One was through the community outreach effort including the survey. Survey results indicate approximately 70% of those riding on campus will likely access UNLV from the east or south side, with the north side being ranked third. The second method used to supplement this analysis was collecting pedestrian and bicycle counts at key locations around campus. Based on counts, the results show that the majority of potential bicycle traffic would occur from the east and north sides, with the south side being ranked third. This is consistent with the information received through the community outreach effort as well.

### *Primary Destinations*

The primary points of destination were determined through both the community outreach effort and through collaboration with UNLV stakeholders.

1. Library
2. Student Union
3. Recreation & Wellness Center
4. Classroom Building Complex
5. Transit Center
6. North Side: *Science, Engineering and Cottage Grove*
7. University Park Apartments
8. Dorm buildings at the south of campus

## Proposed Routes and Support Facilities

Designers should refer to the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities when designing specific bicycle facilities. Additionally, the National Association of City Transportation Officials' (NACTO) Urban Bikeway Design Guide is another nationally recognized resource for bikeway design standards that should be referenced. Both of these documents were used in the preparation of RTC's Regional Bicycle and Pedestrian Plan for Southern Nevada (RBPP). The RBPP identifies several bike facilities, a facility selection guide and design guidelines appropriate for Southern Nevada. There are five general types of bike routes proposed for this plan:

- Roadway with Shared Lane Markings/Sharrows, Traffic Calming
- Roadway with Bike Lanes
- Multimodal Path with Bike Enhancements
- Bike Path Only
- Dismount Path with Wheeling Ramp Connection

Support facilities proposed as part of this plan include:

- Bike Center
- Upgrading Bike Racks
- Major Bike Parking Areas

- Bike Share Stations
- Wayfinding/Signage

Major Bike Parking Areas could include a cluster of bike racks, bike lockers, parking garage cages or an enclosed facility. The locations were selected based on the following criteria:

- High ranked destination and primary traffic area
- Available space
- Outdoor only (no indoor or garage locations)
- Existing shading available
- Existing lighting
- Existing bike racks nearby
- Nearby parking garage
- Nearby transit stop

### *Bike Share Stations*

Bike sharing makes it economical and convenient to use bikes for trips that are too far to walk but too short to drive. The RTC just launched a new bike share program in Downtown Las Vegas this year. UNLV and RTC have discussed partnering to expand the bike share system to the campus. Therefore, this study includes some proposed bike share locations as part of the plan. This study recommends UNLV connect to the existing RTC bike share system rather than exploring other independent systems. This will allow for a seamless and effective regional system. Locations for bike share stations used similar criteria as the Major Bike Parking Areas.

### *Wayfinding and Signage*

Proposed wayfinding locations are identified in the plan. Locations of major destinations and bike parking areas should be clearly identified from designated bike routes. Time and distance for pedestrians and cyclists should be included on wayfinding signs. UNLV does not currently have a design or policy standard for wayfinding signage on campus, however an overall standard should be developed for the campus for all modes.

### *Combining all Components into the Campus Bike Plan*

Figure 12 shows a map of UNLV with the all components of the long-term Campus Bike Plan. The recommendations shown are the outcome of the approach described at the beginning of this section.

## Implementation

### Next Steps

A summary of this Plan's recommendations is included in the Appendix. The next steps for implementation of the project include:

1. Develop a Campus Bicycle Advisory Committee
2. Identify Funding
3. Design and Construction Phasing
4. Program Evaluation
5. Program Refinement and Expansion

It is recommended that UNLV set goals to achieve the long-term plan within ten years. This ten-year plan should include a short-term goal of about 3 years. Figure 13 shows the recommended 3-year goal for a Near Term Implementation Program. UNLV may select some or all components of the Near Term Plan to begin as a pilot program. Each phase will need to complete full design including details on the configuration of bike parking, route improvements and any supporting facilities. Detailed costs and specifications should be included.

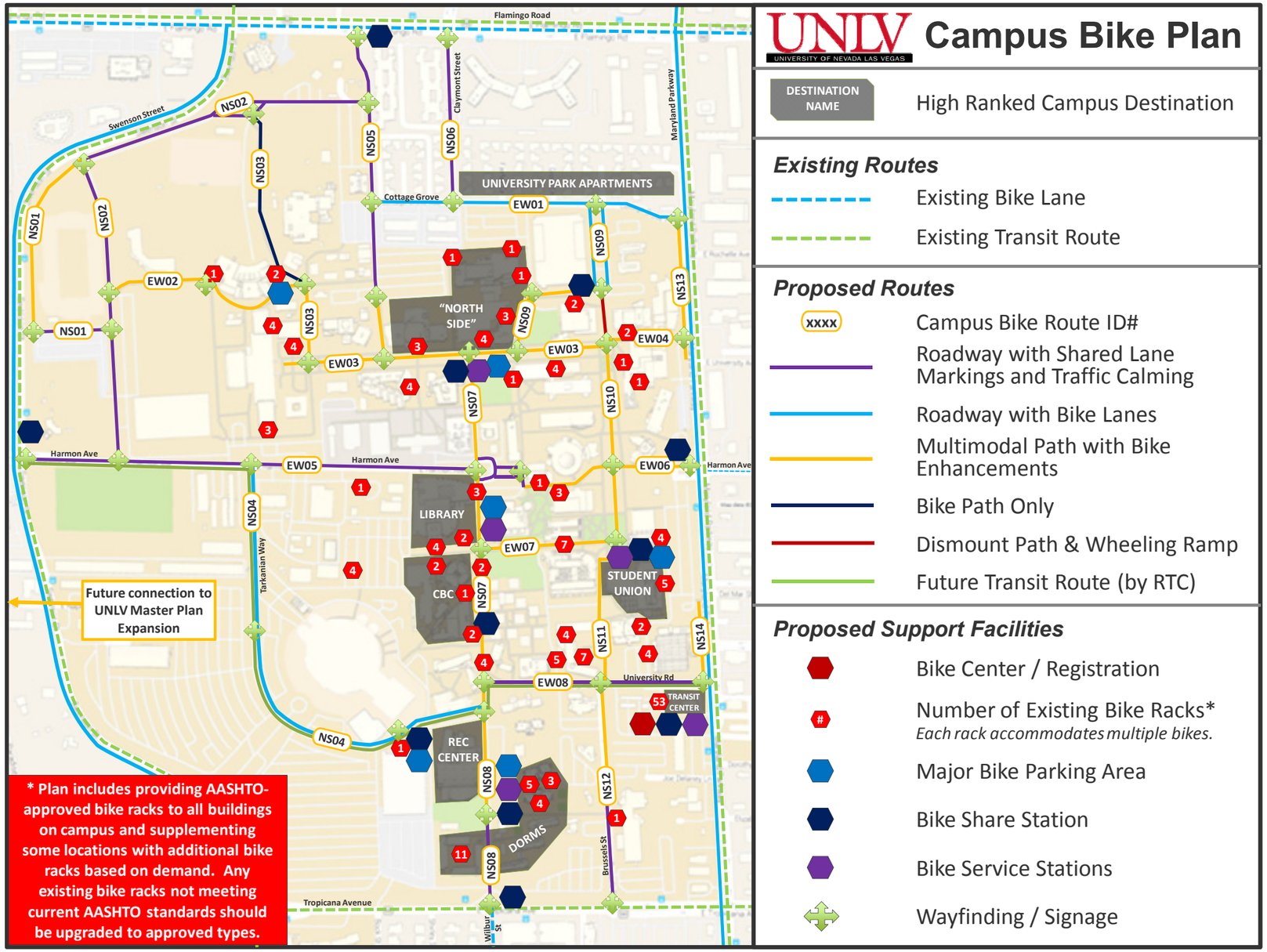
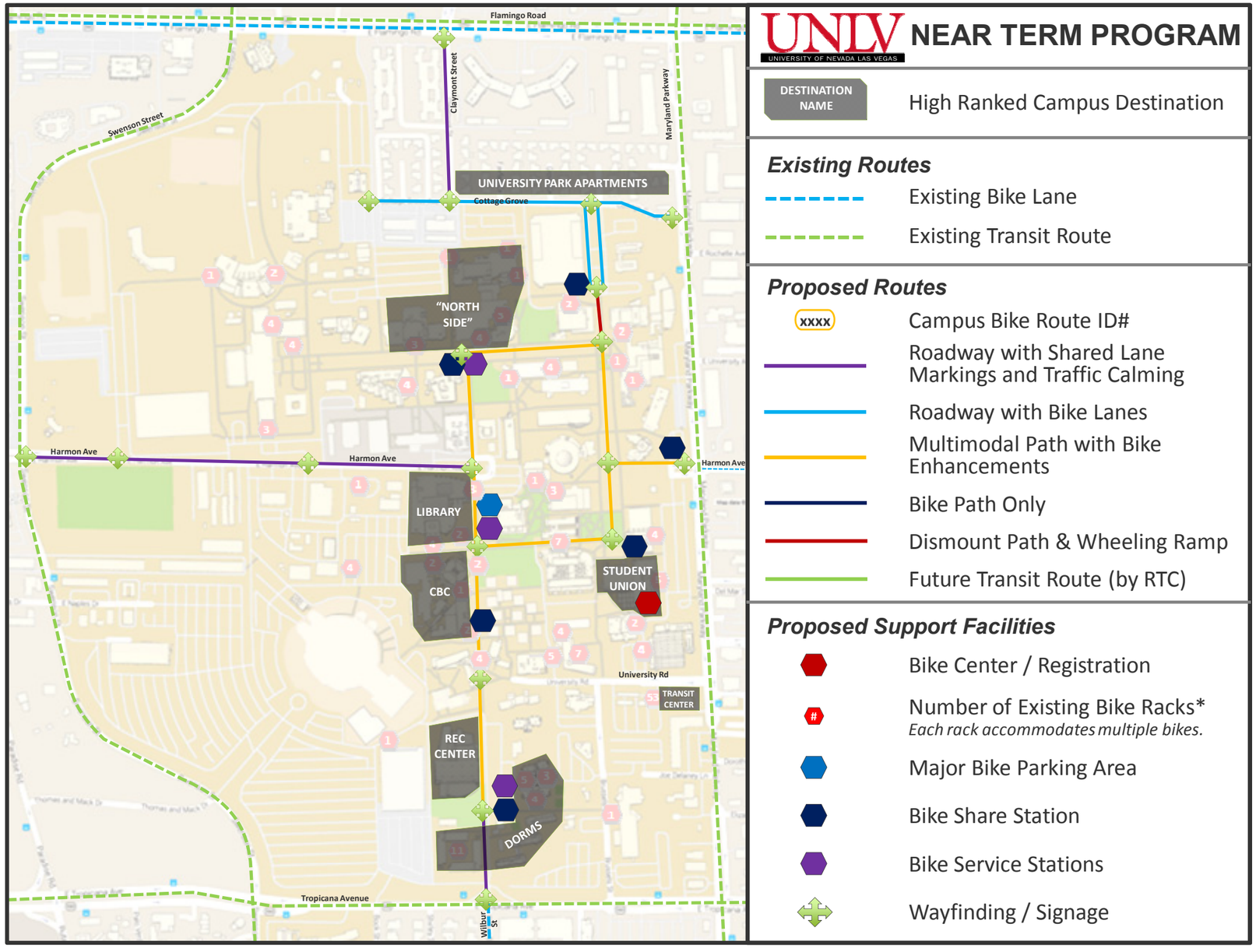



Figure 12: UNLV Campus Bike Plan (Long-Term Plan)




## UNLV NEAR TERM PROGRAM

DESTINATION NAME — High Ranked Campus Destination

### *Existing Routes*

- Existing Bike Lane
- Existing Transit Route

### *Proposed Routes*

- xxxx — Campus Bike Route ID#
- Roadway with Shared Lane Markings and Traffic Calming
- Roadway with Bike Lanes
- Multimodal Path with Bike Enhancements
- Bike Path Only
- Dismount Path & Wheeling Ramp
- Future Transit Route (by RTC)

### *Proposed Support Facilities*

- Bike Center / Registration
- # — Number of Existing Bike Racks*
  *Each rack accommodates multiple bikes.*
- Major Bike Parking Area
- Bike Share Station
- Bike Service Stations
- Wayfinding / Signage

Figure 13: UNLV Campus Bike Plan (Near Term Implementation Program)

SPENCER GREENWAY TRAIL
& UNLV CAMPUS BIKE PLAN

Section 1

# INTRODUCTION

# SECTION 1: INTRODUCTION

## 1.1 PROJECT BACKGROUND

Previous regional and local planning studies have identified a significant need to provide pedestrian and bicycle improvements and other community amenities between Downtown Las Vegas and the University of Nevada Las Vegas (UNLV) Main Campus on Maryland Parkway. During outreach meetings for the Southern Nevada Strong (SNS) Regional Plan, the Nevada Energy-owned "Spencer Utility Corridor", which runs approximately 2.5 miles adjacent to discontinuous segments of Spencer Street about a half mile east of Maryland Parkway, was identified by the community as an opportunity to improve the experience and safety of pedestrians and bicyclists in the area.

With staff support from the National Park Service Rivers, Trails and Conservation Assistance Program, a Planning Team consisting of representatives from the City of Las Vegas, Clark County, Nevada Energy, Southern Nevada Strong, and the Regional Transportation Commission of Southern Nevada (RTC) came together to develop the Spencer Greenway and Public Art Phase 1 Preliminary Feasibility Study to assess the opportunities and challenges associated with developing a paved trail and improvements (e.g. trailheads, public art, etc.) in the Spencer Utility Corridor. While challenges were identified, the Planning Team recommended moving forward with a Phase 2 study to further evaluate conceptual planning and design issues for a community trail and other amenities (greenway improvements, trailheads, rest areas, public art, gathering places, etc.) and to solicit community feedback and support.

The Phase 2 study proposal was submitted by the City of Las Vegas Planning Department as a candidate for funding under the RTC's Fiscal Year 2016 Unified Planning Work Program (UPWP). The UNLV Parking and Transportation Services Department also submitted a UPWP proposal to participate in a regional bicycle trail/corridor plan that addresses the connectivity of bicycle routes and trails to the UNLV campuses, establishes on-campus bicycle routes that connect to other areas off campus, and provides safe and effective storage for bicycles while they are on the campus. In light of the limited funding for UPWP studies and to avoid duplication with other ongoing regional and local studies, the RTC determined that UNLV's proposal would be combined with the City's proposal into a joint planning document focusing on a downsized study area between Downtown Las Vegas and the UNLV Main Campus.

On August 14, 2015, RTC staff held a pre-kickoff meeting with staff representatives from the City of Las Vegas, Clark County, and UNLV to discuss the study area for the joint document. Based on this meeting discussion, it was decided that the limits of this joint document should extend from Charleston Boulevard (the northern limits of the Phase 1 preliminary study) to Tropicana Avenue (southern border of the UNLV Main Campus). A vicinity map of these two projects is shown on Figure 1-1.

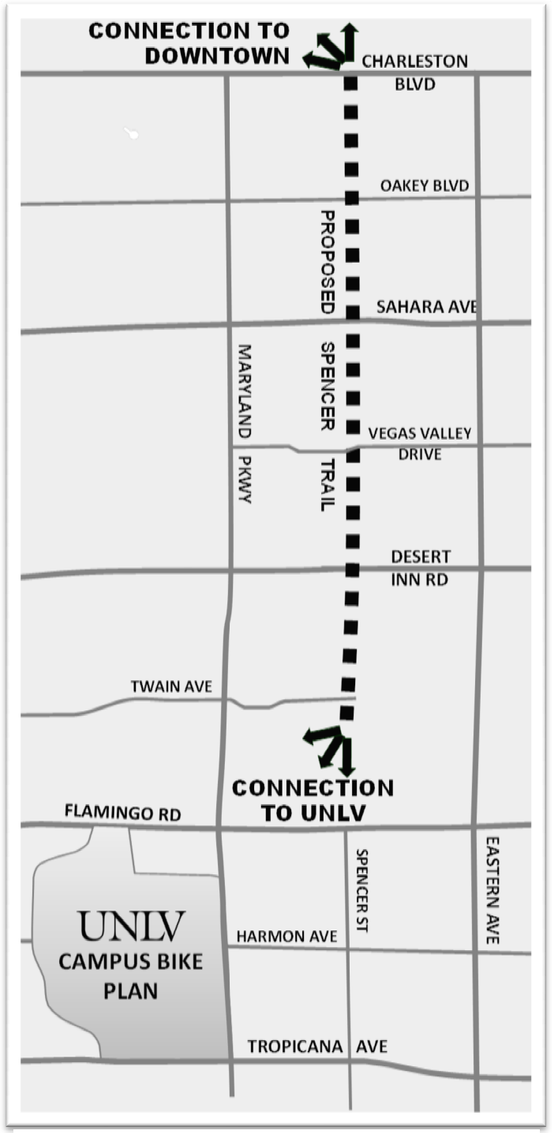



*Figure 1-1: Location Map for Both Projects*

## 1.2 STUDY APPROACH

### Scope of Work Summary

The scope of work includes developing conceptual plans for a multi-use trail and associated amenities on the NV-Energy owned utility corridor adjacent to Spencer Street as well as develop a bike plan for the UNLV Main Campus on Maryland Parkway. Both elements include community outreach to determine the level of community support for proposed concepts. Below is a general outline of study tasks that were undertaken to achieve the goals described in this section:

#### Task 1: Project Management

Task 1 involved coordination with the RTC's designated project manager on a regular basis. All preliminary work and deliverables were submitted to the RTC project manager for review and revision prior to the circulation of these materials to other entities. Monthly progress reports and schedule updates were provided to complete the tasks outlined below. The Project Team in this document refers to the collaborative group formed between RTC and the Parsons team to deliver this project.

#### Task 2: Agency and Community Engagement

At the start of the study effort, the Project Team formulated a Stakeholder Advisory Committee (SAC) consisting of partner agencies including City of Las Vegas, Clark County, Nevada Energy, UNLV, and other stakeholders to guide study development.

The Project Team also facilitated community outreach to achieve the following objectives:

A. Determine the level of community support;
B. Identify desired design elements and uses;
C. Address anticipated concerns regarding crime, privacy, and public health and safety; and
D. Explore potential partnership opportunities.

The team prepared a list of possible public outreach meeting locations within the corridor, reviewed these in collaboration with the SAC and then held four community outreach public meetings for development of the project. The first two public meetings were held early in the process to present goals of the project and receive initial feedback (Initial Public Meetings). Engagement opportunities were also continuously available beyond the initial meetings through email and an online survey. After conceptual alternatives were prepared, the team shared these with the community at the third and fourth public meetings to solicit final input (Final Public Meetings).

#### Task 3: Review of Related Studies

The project team reviewed information and findings from relevant regional and local planning studies and documents. The information these documents and a field review performed by the team formed the basis for the existing conditions analysis of the study.

The team reviewed existing local case studies where trails have been located near utility corridors and flood control facilities. This study will also summarize applicable local and national design standards or guidelines for the community trail and other proposed amenities.

#### Task 4: Conceptual Planning and Design

As part of the conceptual design development, the team completed the following sub-tasks:

A. Develop a Shared Vision
B. Develop Conceptual Plan Alternatives
C. Evaluate Land Rights & Landowner Permissions
D. Evaluate Trail Roadway Crossings
E. Prepare an Implementation Strategy
F. Bicycle Connectivity to UNLV Main Campus
G. Bicycle Amenities at UNLV Main Campus

#### Task 5: Preparation and Circulation of Document

The team compiled a Draft Document and circulated it for review by the SAC. A thorough Comment Tracking Matrix was prepared to compile comments received by the SAC and to summarize how all comments were addressed. Upon incorporation of comments and completion of the final report, the team presented projects to UNLV staff, City of Las Vegas City Council, Clark County Commission, Paradise Town Advisory Board, Winchester Town Advisory Board, the RTC Metropolitan Planning Subcommittee, the RTC Executive Advisory Committee, and the RTC Board.

## Project Development Process and Schedule

The scope of work accomplished in this study was developed over a one year period. The process to complete the tasks is demonstrated in the figure below and is reflected in Table 1-1: Project Development Schedule.

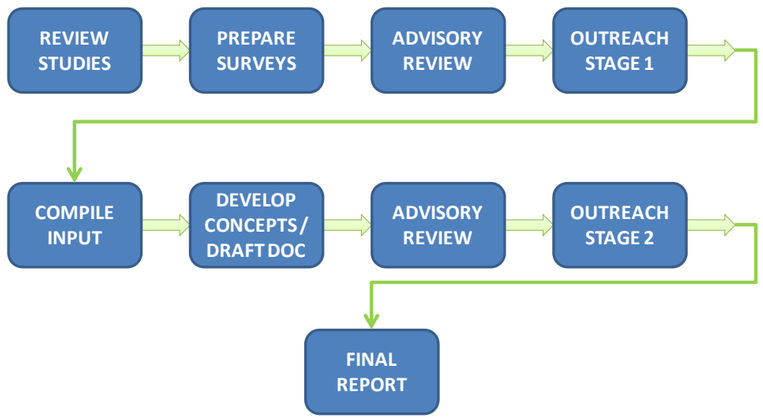



*Figure 1-2: Project Development Process*

*Table 1-1: Project Development Schedule*

| SCHEDULE | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | Jan 2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Task 1: PROJECT MANAGEMENT** | | | | | | | | | | | | |
| **Task 2: ENGAGEMENT** | KICK-OFF | | EVENT | INITIAL MTGS | | ALTERN-ATIVES | | | | FINAL MTG | | PRESENTA-TIONS |
| ADVISORY COMMITTEE MEETINGS | | ● | ● | | | ● | | | ● | | ● | |
| UNLV STUDENT OUTREACH | | | | | | | | | | | | |
| PUBLIC MEETINGS / EVENTS | | | ❑ | ♦ | | | | | | ♦ | | |
| **Task 3: REVIEW STUDIES** | | | | | | | | | | | | |
| **Task 4: CONCEPT DEVELOPMENT** | | | | | | | | | | | | |
| A. SHARED VISION | | | | | | | | | | | | |
| B. CONCEPTUAL ALTERNATIVES | | | | | | | | | | | | |
| C. LAND RIGHTS | | | | | | | | | | | | |
| D. TRAIL CROSSINGS | | | | | | | | | | | | |
| E. IMPLEMENTATION STRATEGY | | | | | | | | | | | | |
| F. BIKE CONNECTIVITY TO UNLV | | | NEW COUNTS | | | | | | | | | |
| G. BIKE AMENITIES AT UNLV | | | | | | | | | | | | |
| **Task 5: DRAFT DOCUMENT** | | | | | | | | | | | | |
| **Task 6: FINAL DOCUMENT** | | | | | | | | | | | | |

## 1.3 SUMMARY OF AGENCY AND COMMUNITY ENGAGEMENT

### Agency Coordination

A Stakeholder Advisory Committee (SAC) was created consisting of partner agencies including City of Las Vegas, Clark County, Nevada Energy, UNLV and other stakeholders to guide study development. Five SAC meeting were held over the duration of the project on the following dates:

- SAC Meeting #1 –February 22, 2016: Project Kick-Off
- SAC Meeting #2 – April 11, 2016: Review of Community Outreach Materials (Initial Public Meetings)
- SAC Meeting #3 – July 14, 2016: Review of Alternatives and Conceptual Development
- SAC Meeting #4 – October 24, 2016: Refinement of Alternatives (based on SAC comments received) and Review of Community Outreach Materials (Final Public Meetings). Members of law enforcement were also invited and participated in a discussion on crime and safety.
- SAC Meeting #5 – December 15, 2016: Final Report/Final Project Meeting

Summary notes of agency meetings are included in Appendix 1A.

Additional agency meetings occurred as follows:

- Spencer Greenway Trail Site Visit (Project Team) - June 14, 2016: Discuss Art Opportunities and Alternatives with RTC
- NV Energy Meeting - June 9, 2016: Discuss preliminary concepts
- Clark County Regional Flood Control District Meeting – July 7, 2016: Discuss Flaming Wash connection opportunities
- UNLV Campus Bike Plan - August 23, 2016: Comment Review Meeting
- UNLV Campus Bike Tour - September 6, 2016: Site Visit to collaborate with UNLV on proposed improvements
- NV Energy Meeting - October 20, 2016: Review revised concepts, utility consolidation options, discuss implementation strategy

### Community Engagement

The RTC set up a project webpage with regular updates on the project that the public could access and comment on at any time. Additionally, the following community outreach tasks were completed to solicit feedback and guide development of concepts for both projects. A full list of the community outreach members and summary notes of various community meetings are included in Appendix 1B.

#### Outreach Specific to the Spencer Greenway Trail

- Identified neighborhoods and community centers with their own social media pages and requested project information be shared.
- Coordinated with community centers along the corridor such as schools and churches for sharing of project materials.
- Contacted Home Owners Associations of surrounding neighborhoods to request inclusion of project information in their community newsletters and shared on social media.
- Met with Homeless Services Outreach Group
- Held two Public Meetings related to the trail corridor during preliminary and final development of the project.
- Met with local stakeholders:
    - Wells Fargo representatives
    - Lake Elementary School – Principal Richards
    - Crestwood Elementary School – Principal McHargue
    - Griffith Community Center – Lorne Cramer
- Prepared a post-card mailer promoting the Final Public Meeting that was distributed to over 300 property owners along the corridor.
- Presentation of final plan to the Clark County Commission, Las Vegas City Council, Paradise Town Advisory Board, Winchester Town Advisory Board, the RTC Metropolitan Planning Subcommittee, the RTC Executive Advisory Committee, and the RTC Board.

#### Bilingual Community Engagement Plan

A project-specific Bilingual Community Engagement Plan was developed for the Spencer Trail and included the following elements:

- Participated in the UNLV multicultural "Festival of Communities" held in April. Promoted project awareness and on-site survey completion on iPads.
- Prepared Spanish versions of the Fact Sheet, Corridor Map, and other materials. Reached out to the following groups and requested their assistance for distribution:
    - The Latin Chamber of Commerce
    - Grocery stores along the corridor. Less than ½ mile from the corridor is Mariana's Mexican Supermarket, a high-traffic grocery store. The corridor also includes Vons and Albertsons, which frequently have Hispanic shoppers and customers arriving by bike.
    - Hispanic churches such as Saint Anne Catholic Church.
    - Nearby Hispanic restaurants such as El Santaneco, Rincon Catracho and Los Antojos Mexicanos.
- Prepared Spanish version of the post-card mailer for distribution.

### Outreach Specific to the UNLV Campus Bike Plan

- Collaborated with UNLV Transportation Research Center who recruited students to participate in campus outreach by distributing flyers, gathering completed surveys, and encouraging students to visit the project website.
    - Prepared a Student Outreach Plan for the UNLV campus that included days, times, and locations on campus for performing the outreach.
    - Performed outreach at two stages of the project, prior to both public meeting timeframes (initial and final). Outreach occurred at multiple high-traffic locations on campus.
    - Posted project outreach materials around campus classrooms, buildings, the Student Union, bulletin boards and other high-traffic locations where permissible.
    - Hosted a community outreach table at the UNLV Festival of communities on April 16, 2016.
- Coordinated with UNLV for sharing of project materials through UNLV distribution lists and organizations.
- Held two Public Meetings related to the UNLV Campus Bike Plan during preliminary and final development of the project.

### General Bicycle and Pedestrian Outreach

- Contacted local pedestrian and bicycle organizations for distribution of project materials. Requested bike shops also participate.
- Provide project materials to partner agencies and other stakeholders for inclusion in stakeholder project websites and email lists.
- Included a link to the project webpage in email blasts to subscribers to the Regional Bicycle and Pedestrian Plan e-news list.

### Summary of Community Outreach Events

The project involved two Initial Public Meetings and two Final Public Meetings. The public meetings were held in an open house format.

**Initial Public Meetings and Events**

The purpose of the Initial Public Meetings was to inform the public of the potential projects, determine the level of interest and solicit feedback on priorities and the elements desired for the projects. One meeting was held on Wednesday, May 4, 2016 at the UNLV Student Union and the other on Monday, May 23, 2016 at The Boulevard Mall. Both of these locations are nearby the Spencer project corridor and UNLV campus. These locations were chosen for their direct access to the project's target users who would be most likely to use the recommended improvements. These meetings were promoted via a Spanish and English outreach to business owners, churches and neighborhood HOA's located within a half mile of the trail corridor. The RTC utilized social media channels such as Facebook and Twitter to reach out to more of the community. Additionally, the RTC communicated regularly with an email list of over 700 subscribers who signed up for updates about the plan. Below is a synopsis of these meetings:

**INITIAL MEETING #1**

Date: Monday, May 4, 2016 Time: 11 a.m. – 2 p.m.

Location: UNLV Main Campus—Student Union, 4505 S. Maryland Parkway, Las Vegas, NV 89154

The project team set up inside the UNLV Student Union in a prominent location. Signage was placed at various entrances to direct visitors to the open house. A number of large displays were provided and staff spoke with interested individuals, providing them project information and asking for their input. Surveys were also provided for visitors at the event via IPads. Because of the event location and its existing foot traffic, the project team was able to interact with a significant number of people.

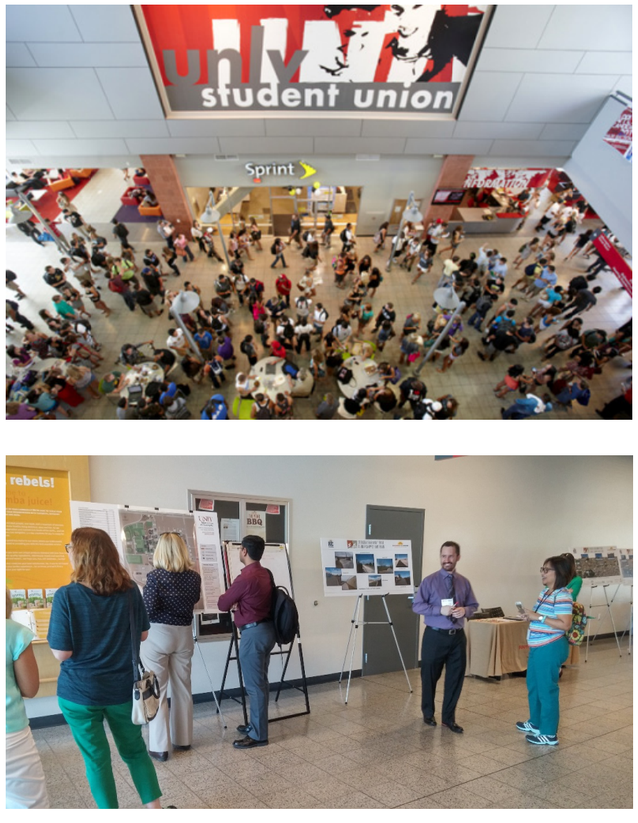



*Figure 1-3: Photos of Community Outreach at UNLV (Initial Meeting)*

**INITIAL MEETING #2**

Date: Monday, May 23, 2016

Time: 4 p.m. – 7 p.m.

Location: The Boulevard Mall, in front of JC Penney, 3528 S. Maryland Parkway, Las Vegas, NV 89169

The project team set up at the mall in front of the JC Penney interior main entrance. Signage was placed at various entrances to direct visitors to the open house. A number of large displays were provided and staff spoke with interested individuals, providing them project information and asking for their input. Surveys were also provided for visitors at the event via IPads. Because of the event location, there was significant foot traffic through the event reaching over 75 people.

*Figure 1-4: Photo of Community Outreach at The Boulevard Mall (Initial Meeting)*

**UNLV Festival of Communities on April 16, 2016**

The project team set up a table at the UNLV Festival of communities on April 16, 2016. This is an annual multicultural celebration organized by students which typically attracts over 7,000 people. A number of large displays were provided and staff spoke with interested individuals, providing them project information and asking for their input. Surveys were also provided for visitors at the event via IPads. Because of the event location and its existing foot traffic, the project team was able to interact with a significant number of people.

*Figure 1-5: UNLV Festival of Communities 2016 Flyer*

*Figure 1-6: Photo of Community Outreach at UNLV Festival of Communities*

**Final Public Meetings and Events**

The purpose of the Final Public Meetings was to present draft concepts to the community that were developed based on the input received from the public and stakeholders in previous months. Since the locations and format of the Initial Public Meetings proved very successful, these were used again for the final meetings, holding a meeting at The Boulevard Mall and the UNLV Student Center. Display boards showing draft concepts were provided and staff was available to receive feedback and answer questions. Additionally, the project team mailed event notification postcards to over 300 property owners adjacent to the NV Energy Corridor and continuing south on Spencer to Harmon to connect with UNLV. Several residents receiving the mailers participated in the outreach events and offered valuable feedback.

These meetings were again promoted via a Spanish and English outreach to business owners, churches and neighborhood HOA's located within a half mile of the trail corridor. The RTC again utilized social media channels such as Facebook and Twitter to reach out to more of the community. Below is a synopsis of these meetings:

**FINAL MEETING #1**
Date: Tuesday, November 1, 2016
Time: 4 p.m. – 7 p.m.
Location: The Boulevard Mall, in front of JC Penney, 3528 S. Maryland Parkway, Las Vegas, NV 89169

**FINAL MEETING #2**
Date: Thursday, November 3, 2016
Time: 11 a.m. – 2 p.m.
Location: UNLV Main Campus—Student Union, 4505 S. Maryland Parkway, Las Vegas, NV 89154

*Figure 1-7: Electronic Billboard Display Promoting Open House*

*Figure 1-8: Photos of Community Outreach at The Boulevard Mall (Final Meeting)*

**Survey Results Highlights**

A Spanish and English on-line survey was created to determine the level of interest for the projects and solicit feedback on priorities and the elements desired for the projects. The survey involved several questions broken down into three main categories:

- General questions
- Spencer Trail questions
- UNLV Campus Bike Plan questions

The survey was open from March 10, 2016 through June 25, 2016. Nearly 1,000 total responses were received from the community. 280 responses were received directly as a result of engaging UNLV students as part of the campus outreach. The two most significant results of the survey demonstrated the following:

1. Strong support and interest for a Spencer Trail.
2. Strong indication that the UNLV Bike Plan will increase cycling on campus.

**90% of those surveyed agree a walking and biking trail connecting downtown and UNLV along the Spencer utility corridor would bring benefits to the community:**

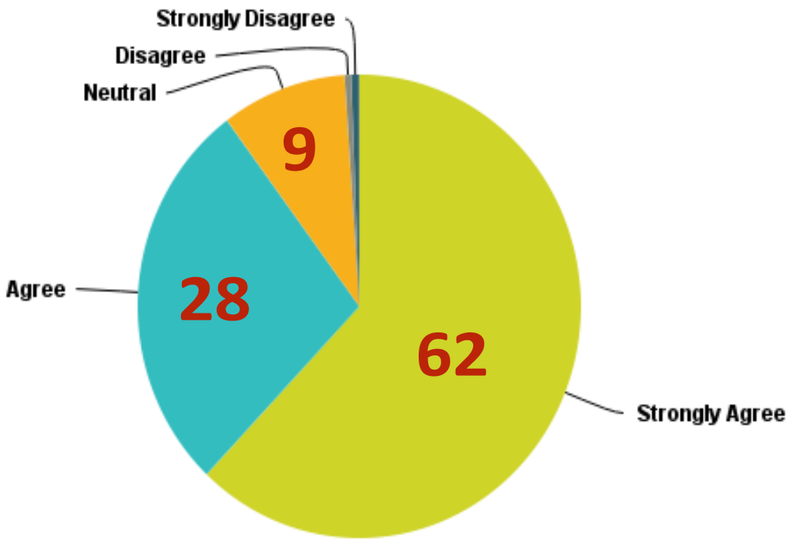



*Figure 1-9: Survey Result Indicating Strong Interest for the Spencer Trail*

**More than 70% of those surveyed said if UNLV provided secure and convenient bike parking on campus, this would this increase their interest in riding a bike to UNLV.**

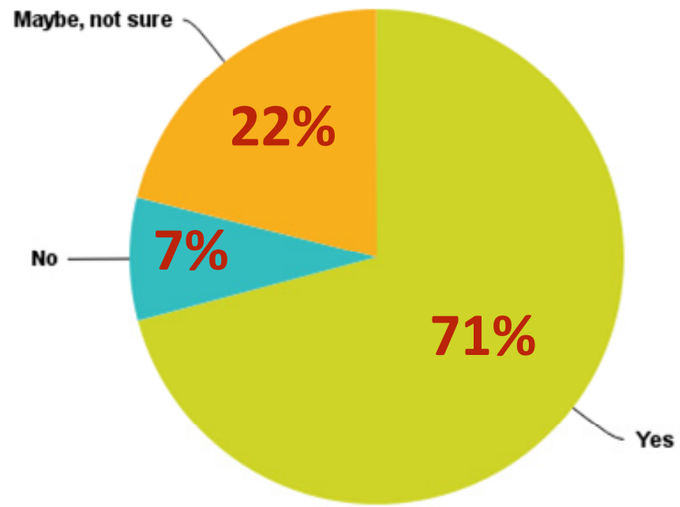



*Figure 1-10: Survey Result Indicating UNLV Bike Plan Will Increase Cycling on Campus*

More detailed survey results are discussed in the project-specific sections of the report. The full survey questions and results are located in Appendix 1C.

SPENCER GREENWAY TRAIL
& UNLV CAMPUS BIKE PLAN

# Section 2

# SPENCER GREENWAY TRAIL

# SECTION 2:

# SPENCER GREENWAY TRAIL

## 2.1 INTRODUCTION

### Existing Conditions and Goals

The full proposed trail system extends approximately 3 miles north to south from Charleston Boulevard to the University of Nevada, Las Vegas (UNLV). The Spencer utility corridor includes the 2.5-mile segment from Charleston Boulevard to Katie Avenue, ending just north of the Flamingo Wash in central Las Vegas. The corridor includes four NV Energy transmission lines and two substations. The 100-foot wide corridor is located adjacent to many neighborhoods, schools, and churches and is used informally for walking in some unfenced areas. The corridor provides an opportunity to develop a paved trail with recreation enhancements and public art. Transforming this utility corridor would have many benefits, such as:

- Implements Regional and Local Plans
- Provides Intermodal Connectivity
- Increases Park and Recreation Access
- Provides Connectivity to Schools
- Revitalizes and Beautifies Neighborhood

Figure 2-1: Photo of Existing Condition

### Community Survey Results

A bilingual on-line survey was created to determine the level of interest for the projects and solicit feedback on priorities and the elements desired for the projects. The survey was open from March 10, 2016 through June 15, 2016. Nearly 1,000 total responses were received. The full survey questions and results are located in Appendix 1C. Below are highlights of the survey results related to the Spencer Trail project.

- **53% walk or ride a bike (for fun or to get somewhere) at least once a week.**
- **90% feel that a walking and biking trail connecting downtown and UNLV along the Spencer utility corridor would bring benefits to the community.**
- **Almost 40% would utilize the trail for transportation as their primary purpose.**
- **Top three concerns:**
  1. **Health, safety and security**
  2. **Effective connections and access**
  3. **Well-maintained facilities**
- **Top five desired features:**
  1. **Lighting**
  2. **Shading**
  3. **Good directional signage**
  4. **Trash disposal**
  5. **Benches and rest areas**
- **Mural and functional art top the survey for types of art to be included along the trail.**

## 2.2 Design Standards

### General Trail Design Standards and Guidelines

The following are some general design standards for consideration:

- Minimum path width of 10’ with 2’ clear space on each side (as per AASHTO standards)
- Running grades should not exceed 5%
- Minimum cross-slope for drainage of 2% (for asphalt or concrete) and 5% (for crushed aggregate)
- Path surface appropriate to location
- Appropriate signage and wayfinding
- Consider striping to separate directional traffic on the path

### On Street Bike Facility Types

Designers should refer to the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities when designing specific bicycle facilities. Additionally, the National Association of City Transportation Officials’ (NACTO) Urban Bikeway Design Guide is another nationally recognized resource for bikeway design standards that should be referenced. Both of these documents were used in the preparation of RTC’s Regional Bicycle and Pedestrian Plan for Southern Nevada (RBPP).

The RBPP identifies several bike facilities, a facility selection guide and design guidelines appropriate for Southern Nevada. Below is a brief description of the facilities that could be used from the RBPP. Because the bike facilities on this project are part of a comprehensive trail connection, bicycle boulevards are recommended over just a “Shared Roadway” for road sections with limited space. The original document should be referenced for more details on design features, typical applications and other guidelines.

#### *Shared Roadway*

Shared roadways (or bike routes) are roadways without dedicated bicycle facilities that include Shared Lane Marking stencils and wayfinding signage as additional treatments. The stencils can serve a number of purposes, such as making motorists aware of the need to share the road with bicyclists, showing bicyclists the proper direction of travel, and, with correct placement, reminding bicyclists to bike farther from parked cars to prevent “dooring” collisions.

#### *Bicycle Boulevards*

Bicycle boulevards are a low-volume, low-speed streets modified to enhance bicyclist comfort by using treatments such as signage, pavement markings, traffic calming and/or traffic reduction, and intersection modifications. These treatments allow through movements of bicyclists while discouraging similar through-trips by non-local motorized traffic.

#### *On-Street Bicycle Lanes*

On-street bike lanes designate an exclusive space for bicyclists through the use of pavement markings and signage. The bike lane is located directly adjacent to motor vehicle travel lanes and is used in the same direction as motor vehicle traffic. Bike lanes are typically on the right side of the street, between the adjacent travel lane and curb, road edge, or parking lane.

#### *Buffered Bicycle Lanes*

Buffered bike lanes are conventional bicycle lanes paired with a designated, painted buffer space, separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane.

#### *One-Way Separated Bike Lanes*

One-way separated bicycle lanes are on-street bikeway facilities that are separated from vehicle traffic. Protection for separated bicycle lanes is provided through physical barriers between the bike lane and the vehicular travel lane. These barriers can include bollards, planter strips, extruded curbs, or on-street parking. Separated bike lanes using these barrier elements typically share the same elevation as adjacent travel lanes, but the bike lane could also be raised above street level, either below or equivalent to sidewalk level.

#### *Two-Way Separated Bike Lanes*

Two-way Separated Bike Lanes are bicycle facilities that allow bicycle movement in both directions on one side of the road. Two-way separated bike lanes share some of the same design characteristics as one-way separated bicycle lanes, but may require additional considerations at driveway and side-street crossings.

## Crime and Safety

After the project team conducted the first round of outreach efforts, it was evident that concerns with crime and safety were one of the top issues. It will be important to address these issues so users feel safe along the trail. Some methods for addressing these include:

- Cameras and Emergency Call Boxes
- Crime Prevention through Environmental Design (CPTED)
- Neighborhood, Volunteer and/or Las Vegas Metropolitan Police patrols

Figure2-2: Example of Security Sign

## Cameras and Emergency Call Boxes

Physical improvements can be incorporated into the trail to help. Some suggestions include considering installation of cameras/video patrol and police call boxes. Cameras have limitation because they require someone to monitor them, which can be cost prohibitive. However, even un-monitored cameras may discourage unwanted activity along the corridor.

## CPTED (Crime Prevention through Environmental Design)

Another approach that should be included is implementing CPTED best practices into the design (http://www.cpted.net). CPTED is the design, maintenance, and use of the environment in order to reduce both the occurrence and fear of crime. CPTED involves the balanced application of these four principles:

- Natural Surveillance
- Natural Access Control
- Territoriality
- Maintenance & Activity

The "Crime Prevention Through Environmental Design Guidebook" by the National Crime Prevention Council (NCPC) provides a good summary of these principles and some methods for application:

***NATURAL SURVEILLANCE***

*The fundamental premise is that criminals do not wish to be observed. Surveillance or the placing of legitimate 'eyes on the street' increases the perceived risk to offenders. This may also increase the actual risk to offenders if those observing are willing to act when potentially threatening situations develop. So the primary aim of surveillance is not to keep intruders out (although it may have that effect) but rather, to keep intruders under observation.*

*Natural surveillance can be achieved by a number of techniques. The flow of activities can be channeled to put more people (observers) near a potential crime area. Windows, lighting and the removal of obstructions can be placed to improve sight lines from within buildings.*

***NATURAL ACCESS CONTROL***

*Natural access control relies on doors, fences, shrubs, and other physical elements to keep unauthorized persons out of a particular place if they do not have a legitimate reason for being there. In its most elementary form, access control can be achieved in individual dwellings or commercial establishments by the use of adequate locks, doors and window barriers.*

*However, when one moves beyond private property to public or semi-public spaces, the application of access control needs more care. Properly located entrances, exits, fencing landscaping and lighting can subtly direct both foot and vehicular traffic in ways that decreases criminal opportunities. Access control can be as simple as locating a front office to a warehouse.*

*While access control is more difficult on streets and areas that are entirely open to public use, there are other techniques for controlling access in these circumstances. For example, nonphysical or 'psychological' barriers can be used to achieve the objective of access control. These barriers may appear in the form of signs, paving textures, nature strips or anything that announces the integrity and uniqueness of an area. The idea behind a psychological*

*barrier is that if a target seems strange, or difficult, it may also be unattractive to potential criminals.*

*Because any strategy that fosters access control is also likely to impede movement, careful consideration should be given to access control strategies. Such strategies may limit the opportunity for crimes, but should not hinder the mobility of potential victims.*

***TERRITORIAL REINFORCEMENT***

*People naturally protect a territory that they feel is their own, and have a certain respect for the territory of others. Clear boundaries between public and private areas achieved by using physical elements such as fences, pavement treatment, art, signs, good maintenance and landscaping are ways to express ownership. Identifying intruders is much easier in such well-defined spaces.*

*Territorial reinforcement can be seen to work when a space, by its clear legibility, transparency, and directness, discourages potential offenders because of users' familiarity with each other and the surroundings.*

***MAINTENANCE AND MANAGEMENT***

*This is related to the neighborhood's sense of 'pride of place' and territorial reinforcement. The more dilapidated an area, the more likely it is to attract unwanted activities. The maintenance and the 'image' of an area can have a major impact on whether it will become targeted.*

*Another extension of the concept is that territorial concern, social cohesion and a general sense of security can be reinforced through the development of the identity and image of a community. This approach can improve not only the image of the population has of itself, and its domain, but also the projection of that image to others.*

*With clear spatial definitions such as the subdivision of space into different degrees of public/semi-public/ private areas and the raising of standards and expectations, the level of social estrangement would decline. This is known to be related to reduction in opportunities for aberrant or criminal behavior, such as vandalism.*

*Maintenance and management need to be considered at the design stage, as the selection of materials and finishes will impact on the types of maintenance regimes that can be sustained over time. For example, plant material should be selected for its size at maturity to avoid blocking of sight lines.*

Some additional trail design approaches to consider:

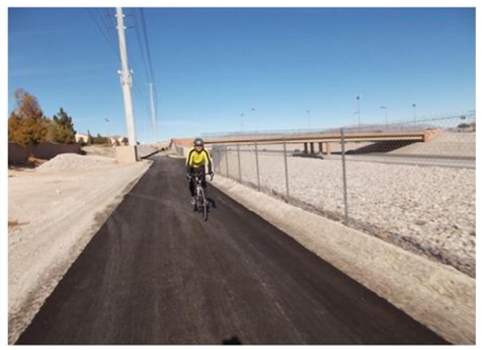
- Design for movement through the trail – keep people moving and discourage loitering
- Utilize large rocks to channel trail users to specific areas and keep them on the trail
- Utilize prickly landscaping to keep people away from certain areas – e.g. backyard walls
- Provide clear wayfinding signage and pavement markers
- Avoid amenity or landscaping design that creates spaces where people can hide or personal items can be stored
- Utilize brighter LED lights instead of sodium

## Local Case Studies

Table 2-1 shows five local trail projects that are also constructed along utility corridors or flood control facilities. The table highlights photos, trail ownership, path type, amenities and other features of each of these projects.

Figure 2-3: Utilizing Large Rocks to Encourage Visitors to Remain on Path

Table 2-1: Local Trails Located Near Utility Corridors or Flood Control Facilities

| |  | | | |
|---|---|---|---|---|
| **Amargosa Trail** | **215 Beltway Trail** | **Lone Mountain East** | **Charlie Kellogg and Joe Zaher Sports Complex (KZ Park)** | **Pittman Wash** |
| Owner : City of Henderson<br>Jurisdiction : City of Henderson<br><br>Features and Recreational Amenities:<br>• Transmission lines<br>• Paved multi-use trail connections<br>• Surfaces include asphalt and concrete<br>• Unpaved recreational hike/mountain bike trail<br>• Educational kiosks<br>• Interpretive signage<br>• Parking areas at trailheads | Owner : Howard Hughes/Public Right-of-Way<br>Jurisdiction : City of Las Vegas /Clark County<br><br>Features and Recreational Amenities:<br>• Transmission lines, portions of the trail are located adjacent to NV energy utility poles.<br>• Wide multi-use trail, paved asphalt trail is approximately 14-feet wide<br>• Lighting<br>• Doggie bag stations and trash cans.<br>• Pedestrian bridges | Owner : Underlying by adjacent subdivisions<br>Jurisdiction : City of Las Vegas<br><br>Features and Recreational Amenities:<br>• Transmission lines (NV Energy)<br>• Multi-use trail<br>• Lighting , trash cans and picnic tables<br>• Landscaping enhancements near street intersections<br>• Benches, trash cans, picnic tables, decorative fence, and other amenities are maintained by home owners association. | Owner : City of Las Vegas<br>Jurisdiction : City of Las Vegas<br><br>Features and Recreational Amenities:<br>• Transmission lines (NV Energy)<br>• Parking lots, lighting fixtures, trees, landscaping and open play areas are located under existing power lines.<br>• Multi-use facilities<br>• Tennis and soccer fields<br>• Picnic areas<br>• Multi-use 2.4 mile track surrounding the park<br>• Lighting and Restroom facilities | Owner : City of Henderson<br>Jurisdiction : City of Henderson<br><br>Features and Recreational Amenities:<br>• Follows what is usually a dry wash through residential neighborhoods<br>• Paved asphalt multi-use trail<br>• Centerline striping<br>• Landscaping, benches and picnic tables<br>• Lighting<br>• Fountains and clean restrooms |

## NV Energy Design Considerations

According to the NV Energy Lands Right-of-Way Management and Transmission Engineering Uniform Standards, transmission corridors may be utilized for secondary uses including parks, open space and trails, contingent on an NV Energy review and approval process. Due to safety and liability concerns and the need to maintain access to utility infrastructure, design parameters are often imposed, such as:

- Limits to the types of amenities
- Location of irrigation
- Pole clearances
- Continued maintenance access to utility poles

Any improvements within the Spencer utility corridor are subject to the NV Energy Lands Right-of-way Management and Transmission Engineering Uniform Standards. While the standards indicate that trails are not permitted where NV Energy owns the land, NV Energy staff have indicated that exceptions may be granted for community-led projects.

Development within or adjacent to transmission corridors require a case-by-case review. All projects require NV Energy approval for conductor clearances. Customers are responsible for complying with all OSHA (Operational Safety and Health Administration) and NESC (National Electric Safety Code) minimum clearances within and outside NV Energy corridors.

With the proper authorization NV Energy transmission corridors may be utilized for the following secondary uses:

- General Parking of operational vehicles not exceeding 8’ in height. Non-operational vehicles and trailers are not allowed.
- Driveways
- Passive recreational parks
- Open space/wildlife corridors
- Biking and walking, trails within existing ROWs
- Free standing signs

For safety and liability reasons, certain improvements are typically not allowed within transmission corridors. These include, but are not limited to, the following:

- Parking or storage of vehicles exceeding 8’
- Buildings or structures
- Covered parking
- Swimming pools
- Parking lot lighting
- Pine and palm trees
- Metallic fences or block walls
- Trash enclosures
- Excavation, elevation or grade changes
- Playground Equipment
- Parallel Utilities
- Stockpiling of materials and equipment

Some exceptions can be made on these typical restrictions pending further review by NV Energy on a case-by-case basis. Proposed furniture, signs, lighting and structures may be permitted but will need to be grounded if materials warrant it. For example, some benches have metal components. Additionally, all proper clearances will need to be maintained. Shade trees are acceptable as long as they continue to meet line clearances even as they mature. No irrigation around the poles is permitted.

### *Undergrounding or Consolidating Power Lines*

The NV Energy facilities for this project include two distribution lines along the outside of the corridor and two transmission lines along the inside. These poles carry additional utility lines including fiber, communications, and telephone lines which will require additional coordination. The communication utilities that utilize NV Energy’s poles along the Spencer corridor include:

- CenturyLink
- Cox
- Zayo Fiber Solutions
- Level 3 Communications
- Extenet Systems
- Integra / Electric Lightwave

The proposed trail concepts work without the relocation of utility poles. Relocating the existing power lines underground would allow greater flexibility in the design of trail improvements while also improving the aesthetics of the corridor. For example, height restrictions and other limitations would no longer be an issue, allowing greater creativity in the design of recreational amenities and public art. During undergrounding, opportunities to install fiber

optic cable for high-speed internet access within a conduit that is separate from NV Energy power lines could also be explored. However, the cost of undergrounding is considerable and likely to be cost prohibitive for the project. Preliminary estimates indicate the cost to underground all power lines within the 2.5 mile corridor would be around $50 to $60 million. Additionally, NV Energy's rights within the corridor would remain as primary, with priority given to NV Energy for maintenance and emergency access. If maintenance or access to power lines requires digging or other disturbance to trail improvements, additional costs for the repair or replacement of trail, recreation, and public art amenities could also be incurred.

Another approach discussed with NV Energy that is less costly and more feasible is the option to consolidate poles. Currently the span between poles is estimated to be approximately 300 to 400 feet. Consolidation may require taller and stronger poles. This approach would not only reduce the number of rows of poles along the corridor, but it could also increase the span to around 500 feet. NV Energy recommends not increasing the spans to 600 feet since the required heights of these poles may impact views from residents. At the time this report was submitted, NV Energy was working on providing planning cost estimates for this approach on this project.

A conservative planning level cost estimate to complete consolidation for the entire corridor was provided by NV Energy. These costs may be further reduced depending on variations of the methods implemented, however an engineering study will need to be completed by NV Energy to provide detailed information on alternative approaches for consolidation along the corridor.

Summaries of project team discussions with NV Energy and the planning level cost estimate are included in Appendix 2B.

Figure 2-4: Newly Placed NV Energy Transmission Pole

## Land Ownership

The majority of the proposed trail would run along the NV Energy utility corridor. Land in the corridor between Charleston Boulevard and Twain Avenue is owned by NV Energy, except for lateral street easements located within public right-of-way owned by Clark County and the City of Las Vegas. Easements for parking lots and flood control have also been granted within the utility corridor, as follows:

- Crestwood Elementary School parking lot, located north of Wengert Avenue
- Griffith United Methodist Church parking lot, located north of E. Oakey Boulevard
- Robert E. Lake Elementary School parking lot, located north of Coronado Avenue/E. Vegas Valley Drive
- Regional Flood Control District flood control channel, located east of Coronado Avenue and south of the Robert E. Lake Elementary School
- LDS Church driveway, located north of Golden Arrow Drive

Additional ROW research information is available in Appendix 2C. This information was also provided to NV Energy. NV Energy staff is reviewing ownership of parcels along their corridor and will provide any missing information as the project goes into design.

## 2.3 Conceptual Plans and Alternatives

### Proposed Names, Logos and Themes

#### Proposed Trail Names

Efforts have been made by the design team to explore different iterations of the name of the trail, all presented to the stakeholders for options to consider.

Through the research process, multiple items were considered that affected the final name. TYPES OF PATHS: The design team looked at how one would describe a trail and the nuances with each definition. While greenway does not necessarily define a landscape of greenery, the typical connotation is a very lush environment in which one can travel through. Due to its heavily urban location and local climate, the design team looked for alternates such as connection, trail, corridor or passage. LOCATION DESCRIPTORS: Trails are typically given monikers that relate to their location, locale, or donors. Spencer is suggested as it is the continuation of Spencer Street that developed the corridor itself. At some points, Spencer Street is even parallel with the trail. Urban is suggested based on its setting within existing Las Vegas neighborhoods. Energy was also suggested as it was a positive descriptor that alludes to the historic nature of the trail as an easement for the local power company. Combinations of these descriptors were then combined, vetted and presented. The final name of the trail has yet to be selected.

#### Proposed Logos

Based on research and discussions with the design team, logos were developed utilizing the naming efforts from above. The initial inspiration for the logo stemmed from a desire to create a minimal visual with a clean aesthetic – one that allowed it to be easily read and identified. The incorporation of arrows that connotes direction, while also the use of icons to establish easily readable action, were also highly desired. Further progressing the idea of iconography, the team explored different types of icons such as bicycles, power lines, arrows/directions, electrical power symbols, movement and activities such as biking, walking, running and play. Fonts were also explored, sourcing various types of modern sans-serif examples that enhanced the unique nature of the trail. Various iterations of logos were presented to the team for their review, which have been further refined for public comment. Alternates and these previous versions are available for review as well.

#### Proposed Themes

Three separate themes have also been identified for the trail. These branding themes are provided as starting points for all wayfinding and visual opportunities throughout the physical space of the trail as well as the associated marketing materials.

**PLAYFUL+WHIMSICAL**: As an effort to further the exploration of art is everywhere, all wayfinding materials can be considered as playful and whimsical pieces of art, in and of themselves. Included in the array of different art opportunities throughout the corridor, these required elements can become playful spots found along the journey.

**SHADE+SHADOW**: Located in the desert climate, the sun becomes a defining feature in any design. The use of shade and shadow to create wayfinding elements allows this need for shade and relief from the sun as an integrated feature throughout the trail. Stencil-type elements are created to further refine the design and creating a clearly desert modern aesthetic.

**BEACON+PILLAR**: The existing utility poles throughout the corridor currently create an interesting vertical notion within a very horizontal landscape. Creating beacons or pillars in this landscape would help emphasis this aesthetic, creating unique vertical wayfinding elements that help guide visitors throughout the trail.

Examples of these themes are found in Figure 2-6: Proposed Themes.

#### Present Proposed Names, Logos and Branding

The trail names, logos and themes proposed for the project are shown in the following figures. These were presented to stakeholders and the community for feedback during the second round of outreach. Some initial feedback indicated a preference for trail names and logos as circled below. The preference for the trail themes was a mix of all three types presented.

**SPENCER CONNECTION 1** **SPENCER TRAIL 2** **SPENCER ENERGY TRAIL 3** **URBAN ENERGY TRAIL 4**

A

C

F

B

D

E

G

Figure 2-5: Proposed Names and Logos

**PLAYFUL + WHIMSICAL**

**SHADE + SHADOW**

**BEACON + PILLAR**

Figure 2-6: Proposed Themes

## Art Opportunities

Public art has an opportunity to become a large component of the proposed trail, offering opportunities for community engagement and aesthetic enhancements. A detailed site-walk of the entire corridor was conducted with the project team, in which preliminary locations were discussed and identified. Through a process of ideation and exploration, multiple types of artwork were curated for the length of the corridor, based on strategic opportunities. These concepts (see Figures 2-7, 2-8, 2-9) were presented to stakeholders for review and refined through team input, resulting in a set of various art types that has the ability to create a diverse experience and establishing a positive contributing factor in the success of the project.

## Potential Locations

Through the use of site visits and mapping data, art locations have been identified throughout the trail. While conceptual in nature, they were intended to provide a diverse set of experiences throughout the corridor, allowing users to interact with multiple types of art. Many of these locations have the opportunity to include the surrounding community in their conception and installation, increasing pride and ownership from residents and community members. Depending on funding of the project, these locations have the ability to expand or contract as needed.

### Parkway – 'Branding' Large Areas:

The corridor itself is a unique, large open area within a dense urban fabric. Parkway art involves art displays over a linear area and is typically comprised of artistically painted concrete sidewalks and plazas. The parkway-type art installations are intended to be low cost efforts that can be spread over large areas, creating "branded" areas of aesthetic themes for certain portions of the corridor. While typically shown in aerial vantage points, efforts should be made to maximize the pedestrian and bicycle-oriented experiences of these spaces, creating visuals from the ground view that enhance the surrounding landscape.

### Wall Art – Large Walls as Art Canvas:

With the long length of the corridor, there are opportunities for available large walls to be utilized as large art canvases. While some murals are located on private commercial buildings along the trail, others have been designated on perimeter walls facing the easement. The project may need to get approvals from HOAs or businesses or individual owners to install anything on a wall. We also propose to minimize the wall art to large open areas that have a significant vantage point from the trail. While typically conceived as two-dimensional murals, various artistic methods are available to cover these large areas. From bas relief to more sculptural installations, the large canvases provided by the corridor allow space for these three-dimensional types of art to establish a prolific presence.

### Electrical – Existing As Sculptural and/or Educational Art:

We believe the history of the corridor as an electrical easement should not be covered entirely, but can become unique experiences through the trail. While concerns for keeping visitors at safe distances have been identified by the NV Energy, we believe utilizing some of these utility elements will further protect them from not only vandalism but also open a dialogue with the public that can make them more aware and engaged. From painting utility boxes similar to the Clark County ZAP program or transferring that same idea to power poles – whether existing or decommissioned – opportunities to enhance the existing electrical utilities should be considered. This can be a good opportunity to educate the public on the electrical infrastructure, how it is used and how it benefits the community.

### Activities – Play & Fitness as Art:

During discussions and reviews of the project, the need for new activity spaces emerged as a way to stimulate the corridor. From playgrounds, to exercise zones, and sporting areas, there are physical ways that can engage with the surrounding community. We believe these elements, though typically utilitarian in nature can also be thought of as artistic expressions. Jungle-gyms can become sculptural iconography, while sporting and exercise equipment can become sculptural follies throughout the landscape.

### Community – Low Cost but High Impact:

The need for deep-pocket donors is not essential to creating a remarkable trail of experiences. There are many low-cost, but high-impact design methods that can be utilized to establish art throughout the corridor. The use of repetition can transform a simple material from the ordinary to the delightful, whether bottle caps on a wall to water bottles filled with colored water. These types

of low-cost and readily available materials can be amassed easily to produce complex surfaces, and can just as easily be installed. Even the parking lots of schools and community spaces can become open canvases of expression. Coordination with community leaders and stakeholders, such as school or church representatives, is a great way to get the community behind these efforts, taking pride and ownership on the art contributions to the trail.

### Crossings – Art to Slow Down Traffic:

Due to the length of such an urban trail, there are inherit areas in which pedestrians and bicycles will be forced to interact with the street and vehicular traffic. Artistic opportunities are presented here as additional steps that can be taken to create a safer and more enjoyable environment through the corridor. While they can be considered as larger canvases for two-dimensional art, a three-dimensional visual can also be incorporated – creating a forced perspective that can aid in slowing traffic in such areas. The weathering of such art, plus the tire markings should all be considerations for this type of art installation – or possibly limiting these to the lower traffic volume streets.

### Bike Amenities – As Art:

The storage and safety of bicycles should not only be seen as a prerequisite for a bike trail, but an occasion to celebrate the bicycle, both functionally and artistically. Bike storage can be incorporated into other street amenities, such as benches and tables, creating hybrids that become unique moments in the landscape. Instead of more typical horizontal storage racks, bikes can be placed on rotating contraptions – powered either by a stationary bike itself or electrical motor. While starting as purely artistic expressions, these machines have become more readily available with their whimsical but functional methods of storage.

### Shade – As Art:

Shade has the opportunity to be utilized not only as an essential necessity but as playful and fun elements throughout the trail. As a necessary means for outdoor enjoyment, especially within the summer season of the Las Vegas Valley, the forms that create shade can be thought of as individual artistic expressions – whether messages written in shadow or whimsical elements creating unique patterns on the walking surface.

### Street Amenities – As Art:

As with any trail, there will be a need for practical objects throughout the journey – such as seating, signage, lighting and waste receptacles. We believe there are opportunities hidden within these utilitarian amenities. From the artistic configuration of a bench, to the artistic expression of a light pole and even simple striping on a trash can to promote activities, these amenities can become a large part of the memorable experience of the trail.

### Present Proposed Art Opportunities

The art opportunities proposed for the project are shown in the following figures (2-7, 2-8, 2-9). Locations for these opportunities are shown on concept maps in the next section. These were presented to stakeholders and the community for feedback during the second round of outreach.

***PARKWAY*** - *'BRANDING' LARGE AREAS:*

***WALL ART*** - *LARGE WALLS AS ART CANVAS:*

***ELECTRICAL*** - *EXISTING AS SCULPTURAL AND/OR EDUCATIONAL ART :*

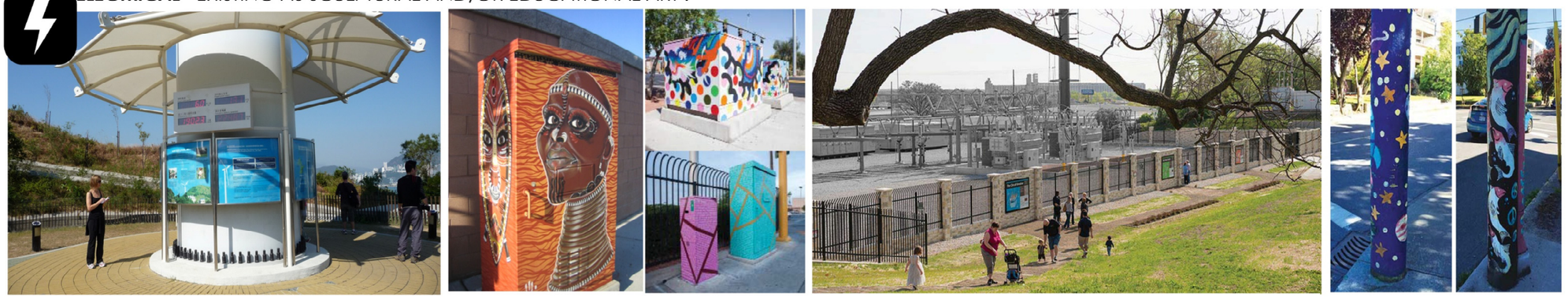


**Figure 2-7 : Art Opportunities (Set 1)- Along the Trail**

***ACTIVITIES*** *- PLAY & FITNESS AS ART:*

***COMMUNITY*** *- LOW COST BUT HIGH IMPACT:*

***CROSSINGS*** *- ART TO SLOW DOWN TRAFFIC:*

**Figure 2-8 : Art Opportunities (Set 2) - Along the Trail**

***BIKE AMENITIES** AS ART:*

***SHADE** AS ART:*

***STREET AMENITIES** AS ART:*

**Figure 2-9 : Art Opportunities (Set 3) – At Trailheads or Trail Access Points**

## Trailheads

It's important for trails to have identifiable entrance points with information about the trail route and rules. The concept plan identifies major trailhead locations and trail access points or minor trailheads and shows two concepts in Figure 2-12**Error! Reference source not found.** below. These are good opportunities to highlight neighborhood branding, history or other community information within kiosks or art displays. The following page outlines the two concepts.

## Major Trailhead

A trailhead is generally defined as a point where a trail begins/ends or a significant point along the trail. These are "community connection points" and typically include more significant enhancements and amenities than other areas along the trail. Certain elements may be included at major trailheads:

- Entry signage
- Colored paving and branding
- Parking lot
- Benches
- Landscaping and accent plantings
- Lighting
- Drinking fountain
- Bike parking and bike repair station
- Shade structure
- Major art opportunity
- Kiosk and information board
- Regulatory and wayfinding signage
- Consolidated or undergrounded utility poles
- Interactive and educational stations

Potential trailheads have been identified for the project at the following locations:

- South end - Orr Middle School (**preferred**)
- Cherokee Lane (Thomas Elementary School)
- Griffith United Methodist Church / Griffith Community Center
- Crestwood Elementary School
- North end - Charleston / Wells Fargo (**preferred**)

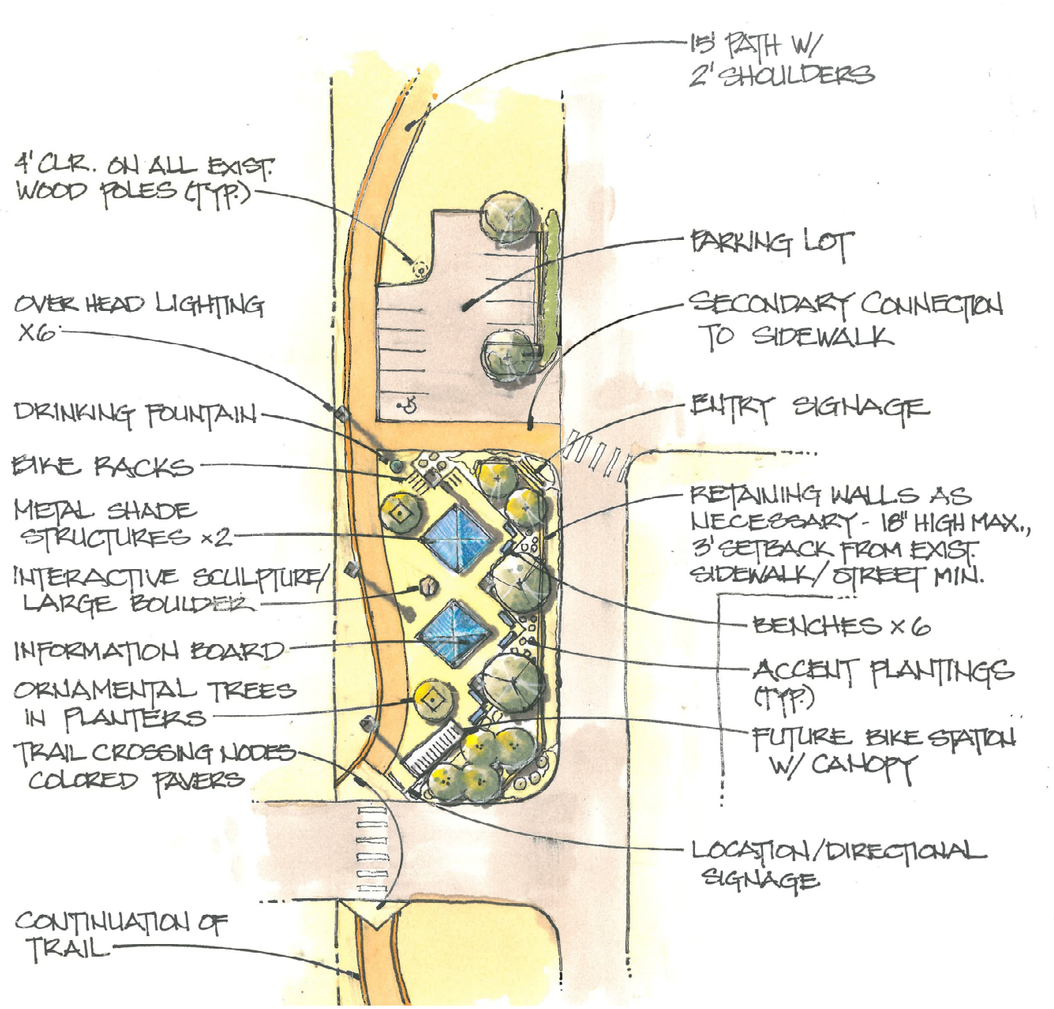
Figure 2-10: Example Kiosk at Trailhead

## Trail Access Point (or minor trailhead)

Trail Access Points have been identified along the trail corridor. These are typically "neighborhood connection points" where streets intersect the trail and allow for access to the trail. Elements that may be included at these Trail Access Points:

- Trail signage
- Trash receptacle and dog waste station
- Bench
- Landscaping and accent plantings
- Shading
- Lighting
- Colored concrete entrance pad
- Regulatory and wayfinding signage
- Trail name and branding (overall and neighborhood-specific)
- Art opportunity or intersection art

Figure 2-11: Example Trail Access Point for Pittman Wash Trail


15' PATH W/ 2' SHOULDERS
4' CLR. ON ALL EXIST. WOOD POLES (TYP.)
PARKING LOT
OVER HEAD LIGHTING X6
SECONDARY CONNECTION TO SIDEWALK
DRINKING FOUNTAIN
ENTRY SIGNAGE
BIKE RACKS
METAL SHADE STRUCTURES x2
RETAINING WALLS AS NECESSARY - 18" HIGH MAX., 3' SETBACK FROM EXIST. SIDEWALK/ STREET MIN.
INTERACTIVE SCULPTURE/ LARGE BOULDER
BENCHES x 6
INFORMATION BOARD
ACCENT PLANTINGS (TYP.)
ORNAMENTAL TREES IN PLANTERS
FUTURE BIKE STATION W/ CANOPY
TRAIL CROSSING NODES COLORED PAVERS
LOCATION/DIRECTIONAL SIGNAGE
CONTINUATION OF TRAIL

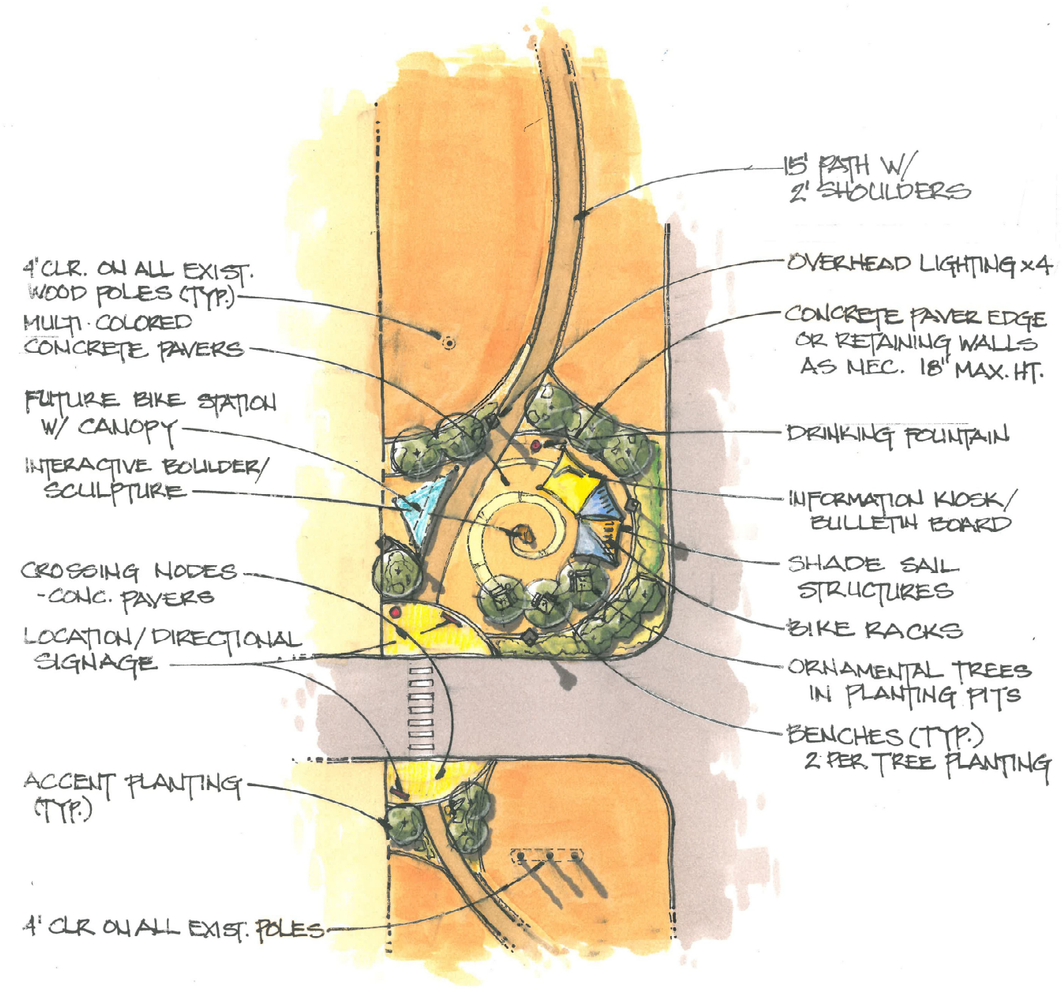

15' PATH W/ 2' SHOULDERS
4' CLR. ON ALL EXIST. WOOD POLES (TYP.)
OVERHEAD LIGHTING x4
MULTI-COLORED CONCRETE PAVERS
CONCRETE PAVER EDGE OR RETAINING WALLS AS NEC. 18" MAX. HT.
FUTURE BIKE STATION W/ CANOPY
DRINKING FOUNTAIN
INTERACTIVE BOULDER/ SCULPTURE
INFORMATION KIOSK/ BULLETIN BOARD
SHADE SAIL STRUCTURES
CROSSING NODES - CONC. PAVERS
BIKE RACKS
LOCATION/DIRECTIONAL SIGNAGE
ORNAMENTAL TREES IN PLANTING PITS
BENCHES (TYP.) 2 PER TREE PLANTING
ACCENT PLANTING (TYP.)
4' CLR ON ALL EXIST. POLES

Figure 2-12 : Trailhead Concepts

## Conceptual Maps and Renderings

Conceptual maps, alternative matrices, and renderings have been prepared for the project limits and are included in the following pages.

## UNLV Connection Alternatives

The project team evaluated a variety of options for connecting the south end of the Spencer Trail to the UNLV Campus. Figure 2-13 shows the five alternatives evaluated for a connection between the trail and UNLV. The preferred near term alternative selected (A-4/A-6) is the connection continuing south on Spencer Street and heading east on Harmon. This connection provides a lower cost, on-street connection for bikes and sidewalk connection for pedestrians. The arrival point on campus corresponds to the main entrance location at Harmon and Maryland Parkway. The ultimate long-term alternative (A-3) would be to construct the trail along the Flamingo Wash so that the trail continues on a largely off-street path to the UNLV campus. The Clark County Regional Flood Control District has near term plans to reconstruct a portion of the drainage facility between Maryland Parkway and Cambridge, and at the time of redesign can consider continuing a trail along this segment, which currently does not provide space for an adjacent trail. From the Flamingo Wash, the route would continue south on Cambridge across Flamingo to the UNLV Campus. Table 2-2 shows details of the alternative evaluation and reasons behind these decisions. The following section also briefly describes

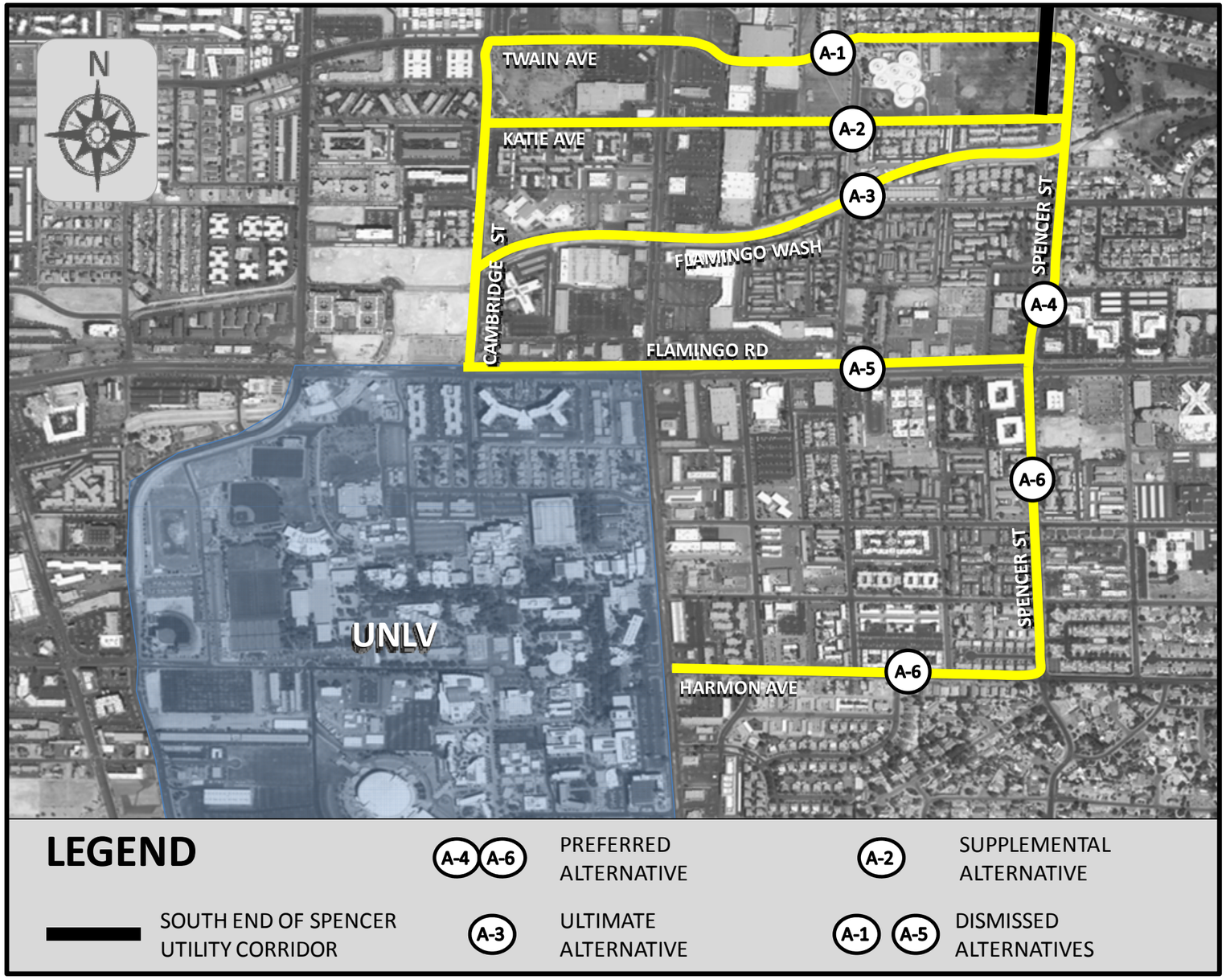



Figure 2-13: Map of UNLV and Spencer Trail Connection Alternatives

Table 2-2: Alternatives A: UNLV and Spencer Trail Connections

| ALTERNATIVE | NAME | SEGMENT LENGTH | EXISTING CONDITIONS | | | | PROPOSED IMPROVEMENTS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ROW Info | Vehicle Lanes | Speed Limit | Bike & Pedestrian Facilities | Improvement | Cost Range $, $$, $$$ | Pros | Cons | Conclusion |
| A-1 | Twain Avenue | 0.75 mile | 80’ ROW, Clark County owned, except segment between Maryland Pkwy and Algonquin is Boulevard Ventures | 4 | 25 mph / 35 mph | No bike facility, 5’ sidewalks | Bike lanes or bicycle boulevard with trail signage / wayfinding | $ | Low cost<br>Signalized intersection at Cambridge/Claymont, existing signals at major crossings.<br>Straight line entry access to UNLV | Part of segment (through The Boulevard Mall) is privately owned, safety concern with crossings, Needs to cross Maryland Parkway | Eliminate Alternative as option |
| | Cambridge Street to Claymont | 0.5 mile | 60’ – 70’ ROW<br>Clark County owned | 4, raised median | 25 mph | No bike facility, 5’ sidewalks | Bike lanes or bicycle boulevard with trail signage / wayfinding | $ | | | |
| A-2 | Katie Avenue | 0.75 mile | 80’ ROW<br>Clark County owned | 2 | 25 mph | Bike lanes, 5’ sidewalks | Trail signage / wayfinding | $ | Low cost<br>Low traffic, low speeds, existing bike lanes on Katie, existing signals at major crossings. | Needs to cross Maryland Parkway | Supplemental Alternative |
| | Cambridge Street to Claymont | 0.40 mile | 60’ – 70’ ROW<br>Clark County owned | 4, raised median | 25 mph | No bike facility, 5’ sidewalks | Bike lanes or bicycle boulevard with trail signage / wayfinding | $ | | | |
| A-3 | Spencer to Flamingo Wash | 0.85 mile | Spencer: 80’ ROW<br>Clark County owned<br><br>Flood Channel | 0 | N/A | No bike facility, 5’ sidewalks on Spencer, no pedestrian access along wash | Spencer: Bike lanes or bicycle boulevard with trail signage / wayfinding,<br>Construct separated trail adjacent to drainage way | $$$ | Shortest distance<br>Safest route, wash segment is fully separated from vehicles, existing signal at Cambridge and Flamingo.<br>Possible funding available as part of future Clark County Flood Control District project | Most expensive option, Greatest constructability challenges | Ultimate Alternative |
| | Cambridge Street to Claymont | 0.15 mile | 60’ – 70’ ROW<br>Clark County owned | 4, raised median | 25 mph | No bike facility, 5’ sidewalks | Bike lanes or bicycle boulevard with trail signage / wayfinding | $ | | | |
| A-4/A-5 | Spencer Street | 0.60 mile | 80’ ROW<br>Clark County owned | 4 | 25 mph | No bike facility, 5’ sidewalks | Bike lanes or bicycle boulevard with trail signage / wayfinding | $ | Low cost;<br>Widened bike lanes already in place along Flamingo Road, providing good access to north and east of campus | Needs to cross Maryland Parkway , not considered high-comfort facility. On-street parking on Spencer. | Eliminate Alternative as option |
| | Flamingo Road | 0.75 mile | 100’ ROW<br>Clark County owned | 6 | 45 mph | Widened bike lanes,<br>5’ sidewalks | Trail signage / wayfinding | $ | | | |
| A-4/A-6 | Spencer Street | 1.0 mile | 80’ ROW<br>Clark County owned | 4 | 25 mph | No bike facility, north of Flamingo, Bik e lanes south of Flamingo/north of Rochelle<br>5’ sidewalks | Complete gap with bike lanes or bicycle boulevard with trail signage / wayfinding<br>(Consider future widening of sidewalks if A-3 alt is not feasible.) | $ | Low cost; lower volume streets; bike lanes already in place for part of route;<br>Straight line access to principal entry point of UNLV at Harmon, significant amount of non-motorized traffic;<br>UNLV plans to reconfigure this entrance point;<br>Crosses Maryland Parkway at location with high awareness for pedestrians. | Needs to cross Flamingo, on-street parking on Spencer limits available space, some gaps with sidewalk connections on one side of Harmon. | Preferred Near Term Alternative |
| | Harmon Avenue | 0.50 mile | 70 - 80’ ROW<br>Clark County owned | 4 with center turn lane | 35 mph | Bike lanes<br>5’ sidewalks for most of street, some gaps on south side | Complete sidewalk gaps, Trail signage / wayfinding<br>(Consider future widening of sidewalks if A-3 alt is not feasible.) | $<br><br>($$) | | | |

## Trail Conceptual Plan Sheets and Alternatives

Figures 2-15 to 2-27 include plan sheets for the remaining length of the project north to Charleston Boulevard. Various planning level elements are included to guide the design such as the alignment of a 15-foot wide asphalt path and alternative connections, trailhead locations, general landscaping, art opportunities, bike facilities, pedestrian crossing improvements and other design considerations. Alternative matrices are then included to highlight characteristics of each and conclusions based on pros and cons and stakeholder feedback (Tables 2-3 to 2-5). The project team and Stakeholder Advisory Committee agreed that asphalt would be used for the trail surface for a number of reasons. Not only is the material less expensive, but additionally, since asphalt is a softer material and does not require expansion joints, it is the preferred material of most pedestrians and cyclists. However, concrete may still be used where needed, such as locations where structural integrity is important or locations where colored concrete is desired for aesthetics.

## Trail Crossings

The proposed Spencer Trail consists of 20 street crossings. These crossings are also referred to as “Trail Access Points” in the previous section on trailheads. This section describes some general recommendations for elements to be included at these points.

Generally, most crossings involve standard crosswalk markings and advanced signage in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). Some crossings on the concept maps indicate the need for pedestrian activated signals or traffic control. Designers should reference the RTC Regional Bicycle and Pedestrian Plan for guidelines on selecting appropriate crossing types for these intersections. Local jurisdictions are given flexibility for this decision based on this guideline.

Pedestrian bridges or overpasses at crossings were considered and ultimately not prioritized as part of this plan for the following reasons:

- Cost prohibitive
- Privacy for residents
- Conflicts with power lines
- Limited space and right-of-way for foundations and ADA ramping requirements
- Safety/security concern with prevalence of homeless people

Where possible, signage should be included that is easily readable from vehicle lanes so those wishing to visit the trail can identify trailheads or trail access points as they approach. This is especially important at major roadways with high speeds.

During the preparation of this report, the Clark County Public Works (CCPW) department initiated a Paradise Palms roadway resurfacing project. Some sidewalk and sidewalk ramps are being installed with this CCPW project. Some trail crossings will need to be coordinated with the existing crossings when the trail project goes to the design phase. CCPW was not able to accommodate some of the recommendations of this plan as part of their project due to right-of-way limitations. However, right-of-way needs can be addressed as part of the trail project since NV Energy is an active partner and public access will need to be arranged for the trail.

## Landscaping

A comprehensive landscaping plan is not part of the current scope, but will be recommended for the design phase. The following are some points to consider as part of this plan:

- Water conservative plants are recommended to limit costs for water usage. The Southern Nevada Regional Planning Coalition (SNRPC) and the Southern Nevada Water Authority (SNWA) developed a Water Smart Landscapes Program Plant List that can serve as a guide for developing landscaping plan (Available online: http://www.snrpc.org/policies-plans-reports).
- Importance of shading along trail that could be provided by trees. Tree heights should meet NV Energy standards on vertical clearance.
- Several community members expressed preference for natural landscaping, emphasizing local desert tolerant plants, and also identified a preference for not using metal sculptural plants.

Figure 2-14: Example of Natural Landscaping near Springs Preserve

### Trail Visualization

The last two figures include a trail visualization for both plan and perspective views. The location for this visualization is just south of Desert Inn in the Paradise palms neighborhood. This is an example of a significant “trail access point” and demonstrates some of the elements that could be included. The visualization presents a conceptual consolidation of utility poles, but further coordination with NV Energy is required to confirm the actual opportunities and configurations that will be possible at this location.

### Spencer Trail Conceptual Plan Maps – Sheets 1 and 2

Plan Map Sheets 1 and 2 cover the trail from Flamingo Road to Twain Avenue. The proposed area is primarily residential and also includes Orr Middle School. This trail section primarily involves the alternative connections between the south end of the NV Energy utility corridor to UNLV, discussed in the earlier section of this report. The 15-foot wide paved asphalt path begins just north of Katie Avenue within the utility corridor. A major trailhead (preferred option) is recommended at this location since it is a key southern point for the project. Additionally, there is opportunity for the trailhead to interact with the existing park adjacent to Orr Middle School existing park. Because of the school and residential area, there is a Community Art Opportunity within this trailhead. The plan recommends new pedestrian ramp, crosswalks and advanced warning signs on the trail at Katie Avenue and Twain Avenue. These are both relatively low volume traffic crossings with posted speed limits of 25 mph.

### Spencer Trail Conceptual Plan Maps – Sheets 3 and 4

Plan Map Sheets 3 and 4 cover the trail from Twain Avenue to Desert Inn Road. The proposed area is primarily residential, part of the Paradise Palms neighborhood. Ruby Thomas Elementary School is located about 700 feet west of the proposed trail, with Cherokee Lane being a primary access street.

Within this section, Spencer Street splits into two one-way streets located on either side of the utility corridor. The 15-foot wide paved asphalt path would continue along this section within the utility corridor. A trailhead (supplemental option) is recommended at this location due to the proximity to Ruby Thomas Elementary School and to possibly provide a remote location for school drop-off/pick-up.

The plan recommends new pedestrian ramps, crosswalks and advanced warning signs at Ottawa Drive, Cherokee Lane, Commanche Drive and Nahatan Way. These are relatively low volume traffic crossings with posted speed limits of 25 mph. The plan also includes traversing pedestrian improvements to provide connections to residential areas on either side of the trail.

This trail section is identified as a very good candidate for a Parkway Art Opportunity because of the linear open space available. The point where Nahatan Way meets Spencer Street acts as the northern entrance to the neighborhood. Therefore, the area was identified as potential location for a Trail Access Point with enhanced amenities and a Community Art Opportunity. A visualization of the trail at this location is presented later in Figures 2-28 and 2-29 of this report.

The utility corridor segment between Nahatan Way and Desert Inn Road would be unprogammed space due to the existing substation here eliminating access. Landscaping and fencing could be placed at the south end of this segment to prevent trail users from accessing this area and provide aesthetic enhancements across the street from the access point on the south side of the intersection. However, the fencing should still provide access for any NV Energy maintenance vehicles.

For the connection between Spencer Street, Nahatan Way, Pawnee Drive and Desert Inn Road, the plan recommends an enhanced bicycle/pedestrian connection. This could be a sidepath on the east side of the road only, widening the sidewalk to 10 feet. This approach has several advantages. For example, the east side does not have intersecting streets such as the west side. Additionally, it eliminates the need for additional pedestrian crossings on the west side of the roads. A good wayfinding system will be required to guide trail users along this connection. Alternatively, the sidewalk on the east side could be designated for pedestrian traffic while an on-street bicycle facility such as a bicycle boulevard could provide the connection for people on bikes. A bicycle boulevard might include shared lane markings on the roadways and curb extensions at intersections to narrow the roadway and slow down traffic.

Figure 2-15: Trail Concept Maps - Sheet 1

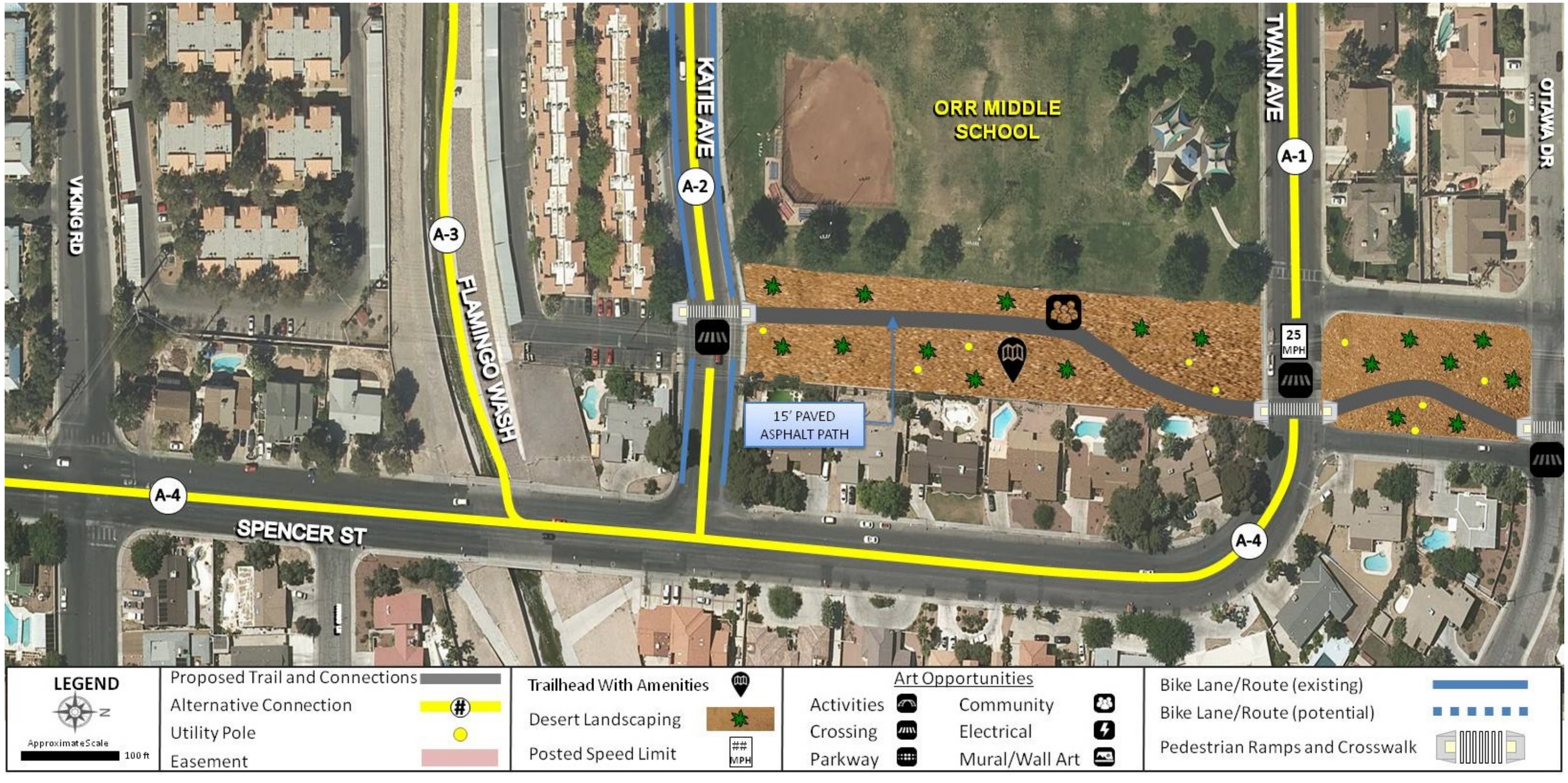



Figure 2-16: Trail Concept Maps - Sheet 2

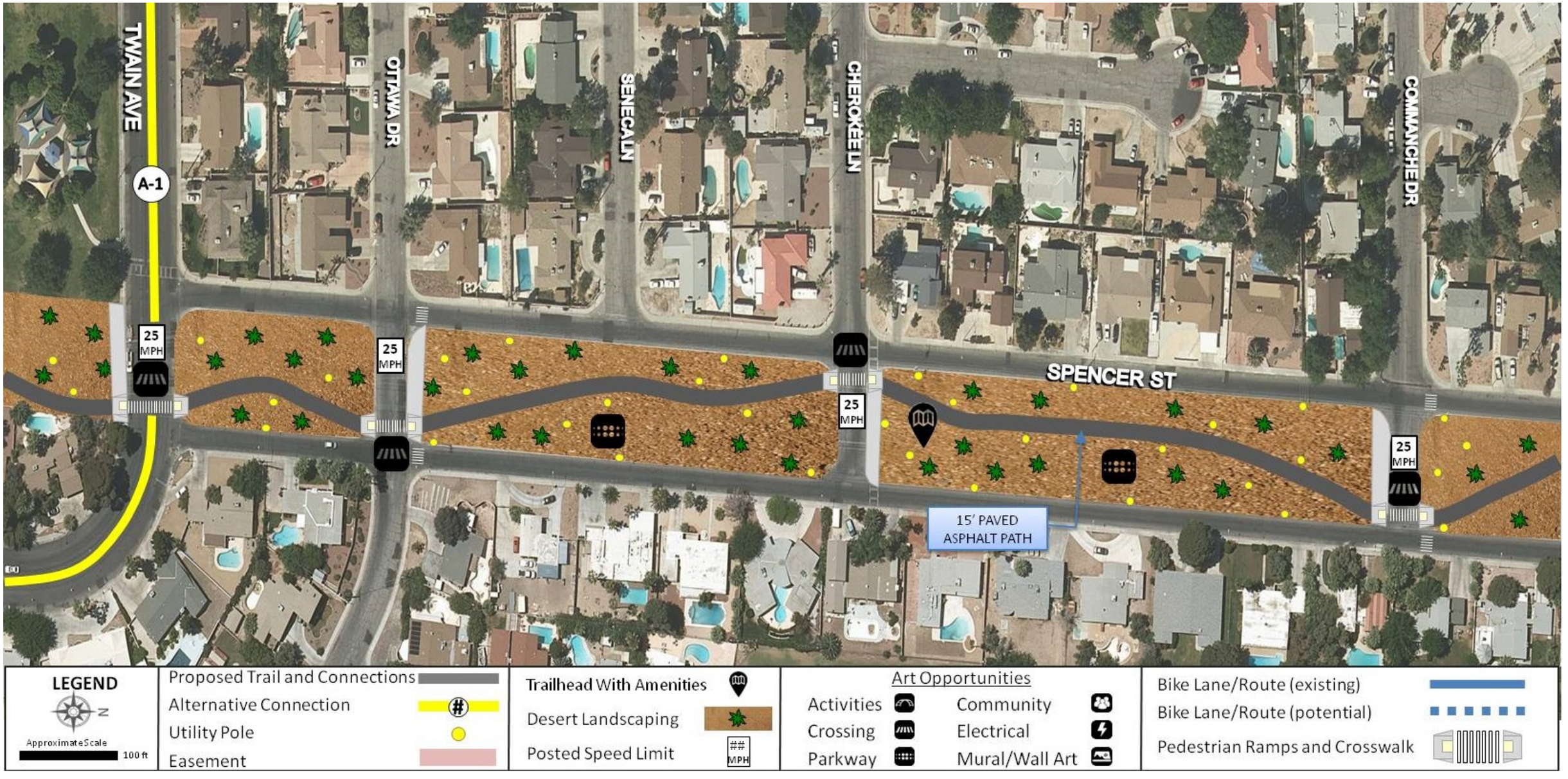



Figure 2-17: Trail Concept Maps - Sheet 3

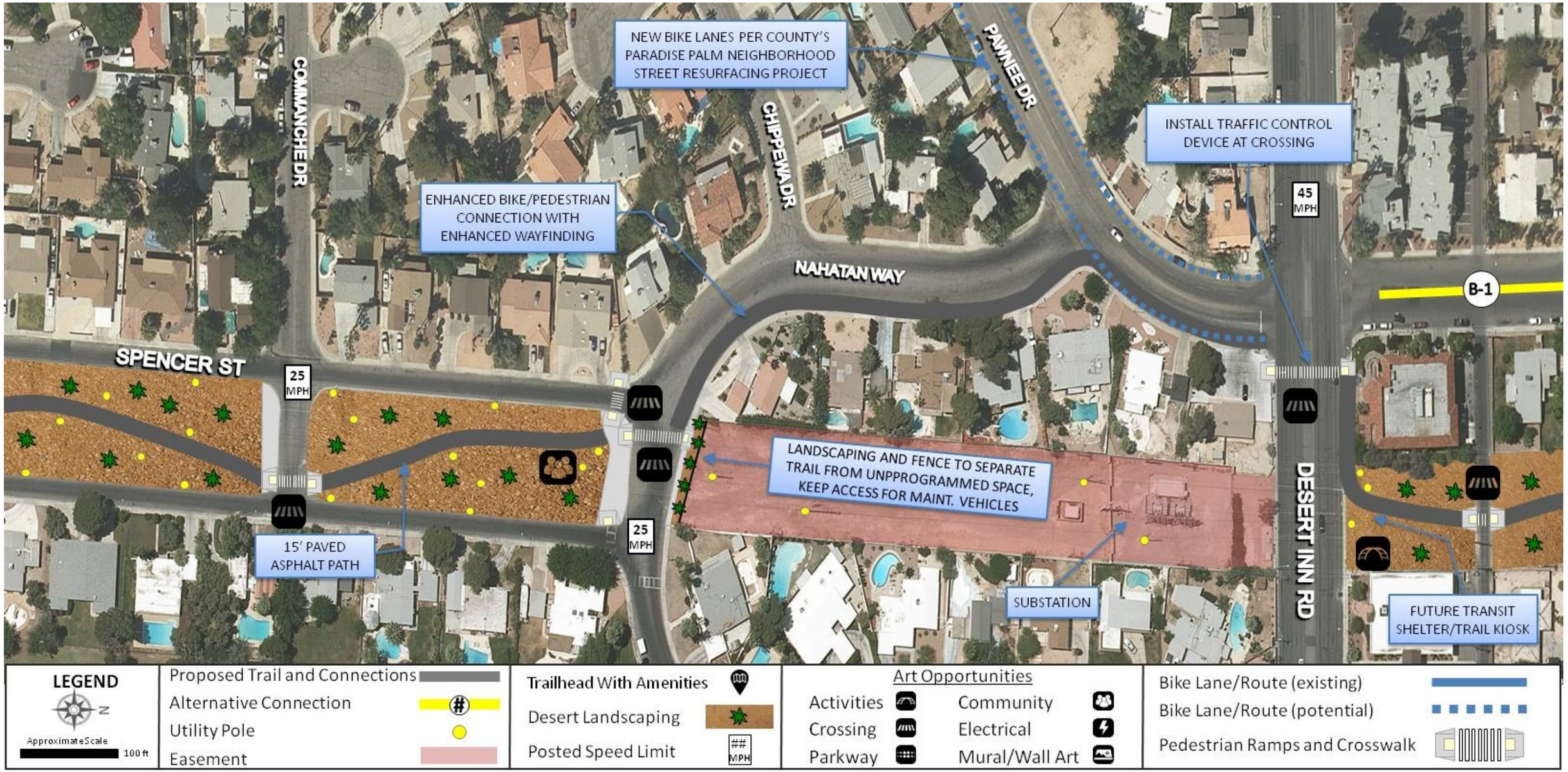



Figure 2-18: Trail Concept Maps - Sheet 4

## Spencer Trail Conceptual Plan Maps – Sheets 5 and 6

Plan Map Sheets 5 and 6 cover the trail from Desert Inn Road to Vegas Valley Drive. The proposed area is primarily residential and also includes the LDS Church to the west of the proposed trail south of Palora Avenue and north of Golden Arrow Drive. This area is identified as a potential location for a Community Art Opportunity that could involve residents or church members. There is also a Wall Art/Mural Art opportunity in the segment between Palora Avenue and Vegas Valley Drive. Additionally, because of the length of segment between Sombrero Drive and Golden Arrow Drive, this piece is a good candidate for a Parkway Art Opportunity. A widened decorative, colored concrete path could be used along this segment as part of the design.

The plan recommends new pedestrian ramps, crosswalks and advanced warning signs on the trail at street crossings like Sombrero Drive, Golden Arrow Drive and Palora Avenue. These are relatively low volume traffic crossings with posted speed limits of 25 mph. Vegas Valley Drive is a four-lane, 30 mph arterial crossing with no existing median. The RTC RBPP Crossing Selection Guide indicates a Hybrid Beacon for an arterial street such as this one. If a median refuge is provided, an Active Warning Beacon (RRFB) or PELICAN signal could be considered.

The section of the trail also includes two alternative connections between Desert Inn Road and Golden Arrow Drive. The 15-foot wide path within the utility corridor is the preferred option over the alternative B-1 and details of this evaluation are included in Table 2-3. Desert Inn Road has a posted speed limit of 45 mph with significant traffic volumes and no raised median (only a center turn lane). A traffic control device would need to be installed at this crossing for trail users. The RTC RBPP Crossing Selection Guide indicates a Hybrid Beacon for an arterial street such as this one, or a full traffic signal if future trail traffic warrants this option. If a median refuge is provided, a PELICAN signal could be considered.

Between Golden Arrow Drive and the segment connecting to the utility corridor to the north there is a significant elevation change. The plan recommends retaining walls at this location so the path can transition between the two points without significant grade changes.

## Spencer Trail Conceptual Plan Maps – Sheets 7 and 8

Plan Map Sheets 7 and 8 cover the trail from Vegas Valley Drive to Sahara Avenue. The 15-foot wide paved asphalt path would continue along this section within the utility corridor. The proposed area is primarily residential and also includes the Robert E. Lake Elementary School to the west between Coronado Avenue and Del Mar Avenue. The school indicated that the parking lot is typically fully used and they cannot afford to lose spaces. Therefore construction of a parking lot extension is recommended to provide additional spaces for those lost due to the trail path.

This area is identified as a potential location for a Community Art Opportunity that could involve residents and school staff and students. There is also an Activities Art Opportunity identified for the segment between Del Mar Avenue and Karen Avenue. This is a high visibility area between the two streets and a good opportunity for needed recreation space for neighborhood residents where utility poles could be undergrounded. There is also a Wall Art/Mural Art Opportunity and a Parkway Art Opportunity identified in the segment between Karen Avenue and Sahara Avenue.

Del Mar Avenue (25 mph) and Karen Avenue (25/35 mph) each have existing pedestrian ramps, crosswalks and advanced warning signs for school crossings. Karen Avenue includes an overhead speed-limit sign beacon as well. The plan recommends using these existing crosswalks as part of the trail, or coordinating with CCSD on any changes and additional improvements.

Table 2-3: Alternatives B: Desert Inn Rd Connection

| Alternative | Name | Segment Length | Existing Conditions | | | | Proposed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ROW (width, owner, etc) | Vehicle Lanes | Speed Limit | Bike Facilities | Improvement | Cost Range $, $$, $$$ | Pros | Cons | Conclusion |
| Trail Path | Desert Inn Rd | 175 feet | Clark County owns roadway which appears to extend 5' beyond sidewalk creating opportunity for possible 10' wide sidewalk path (see below) | None –right-of-way along sidewalk | N/A | None | 10' wide sidewalk path connection from utility corridor to intersection crossing. Proposed traffic signal installation at Desert Inn crossing. | $$ | Sharp turn will encourage users to slow down at crossing. Future transit shelter / trail kiosk at turn provides barrier at the street and encourages trail traffic to turn. Majority of connection remains within NV Energy corridor, allows for continuation of path and trail elements, completely separated from traffic. Safest option. | Sharp 90 degree turn to approach intersection (not a direct path), may be confusing – additional wayfinding required. Will require coordination with property owner at 1750 E Desert Inn Rd. | Preferred alternative if ROW is available and agreement can be reached with property owner. |
| | Utility Corridor | 1250 feet | NV Energy | 0 | N/A | None | 15' wide path and typical trail elements | $$ | | | |
| B-1 | Pawnee Dr | 1000 feet | 71', Clark County owned | 2 | 25 mph | None | Bike Lanes / Bicycle Boulevard | $ | Lower cost compared to full trail option. Approach is a direct path to signalized intersection which continues on to same street as trail option | Vehicle traffic, on-street parking, non-direct continuation of utility corridor trail path may be confusing, curve creates sight distance concern. | Secondary option, becomes preferred if additional ROW beyond existing sidewalk cannot be converted to widened concrete path (minimum of 8-ft wide required but 10-ft wide preferred). |
| | Golden Arrow Dr | 300 feet | 101', Clark County owned | 2 | 25 mph | None | Bike Lane / Bicycle Boulevard | $ | | | |

Figure 2-19: Property Information for Trail Path Option of Alternative B at Desert Inn Rd

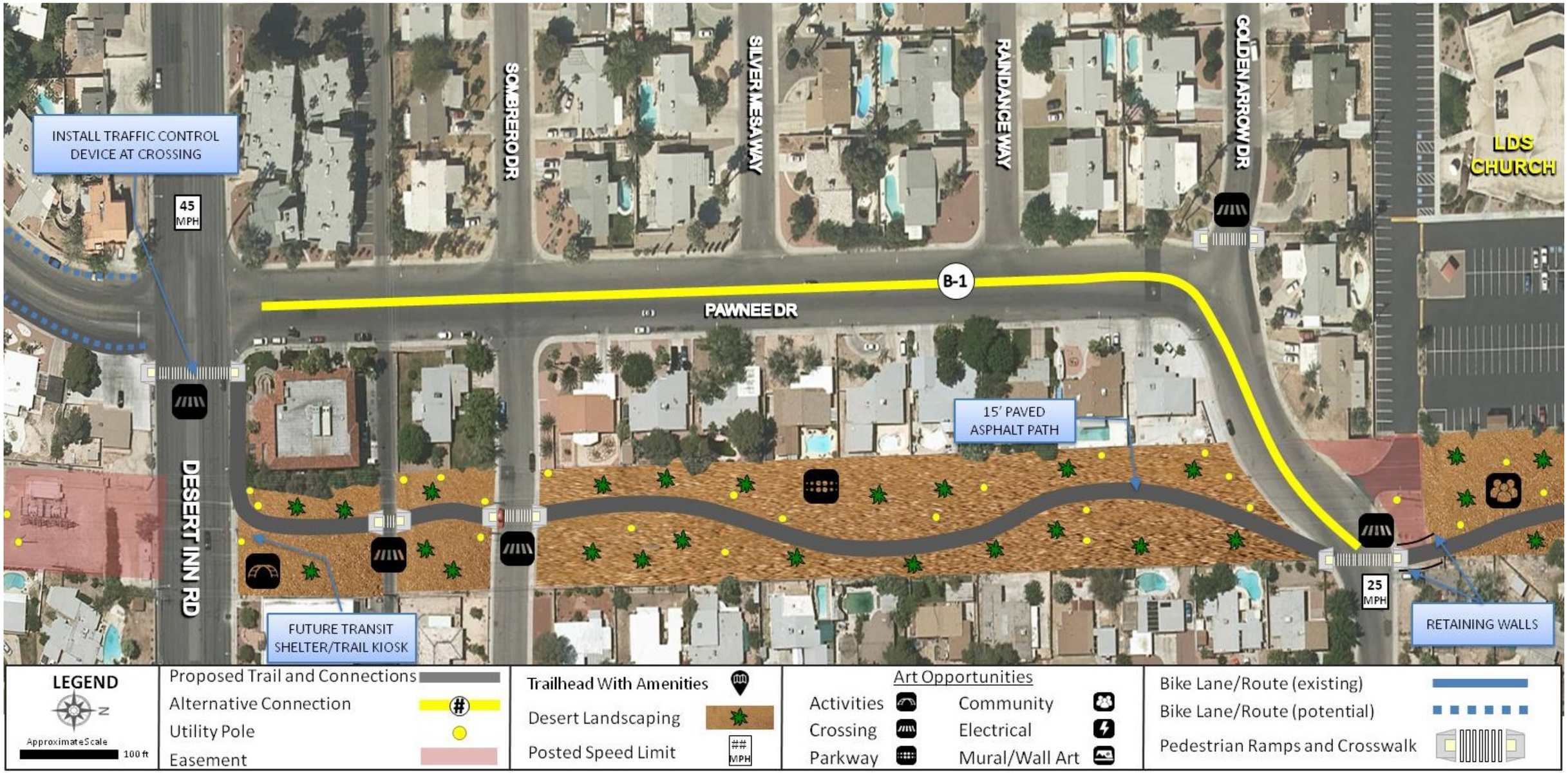



Figure 2 20: Trail Concept Maps - Sheet 5

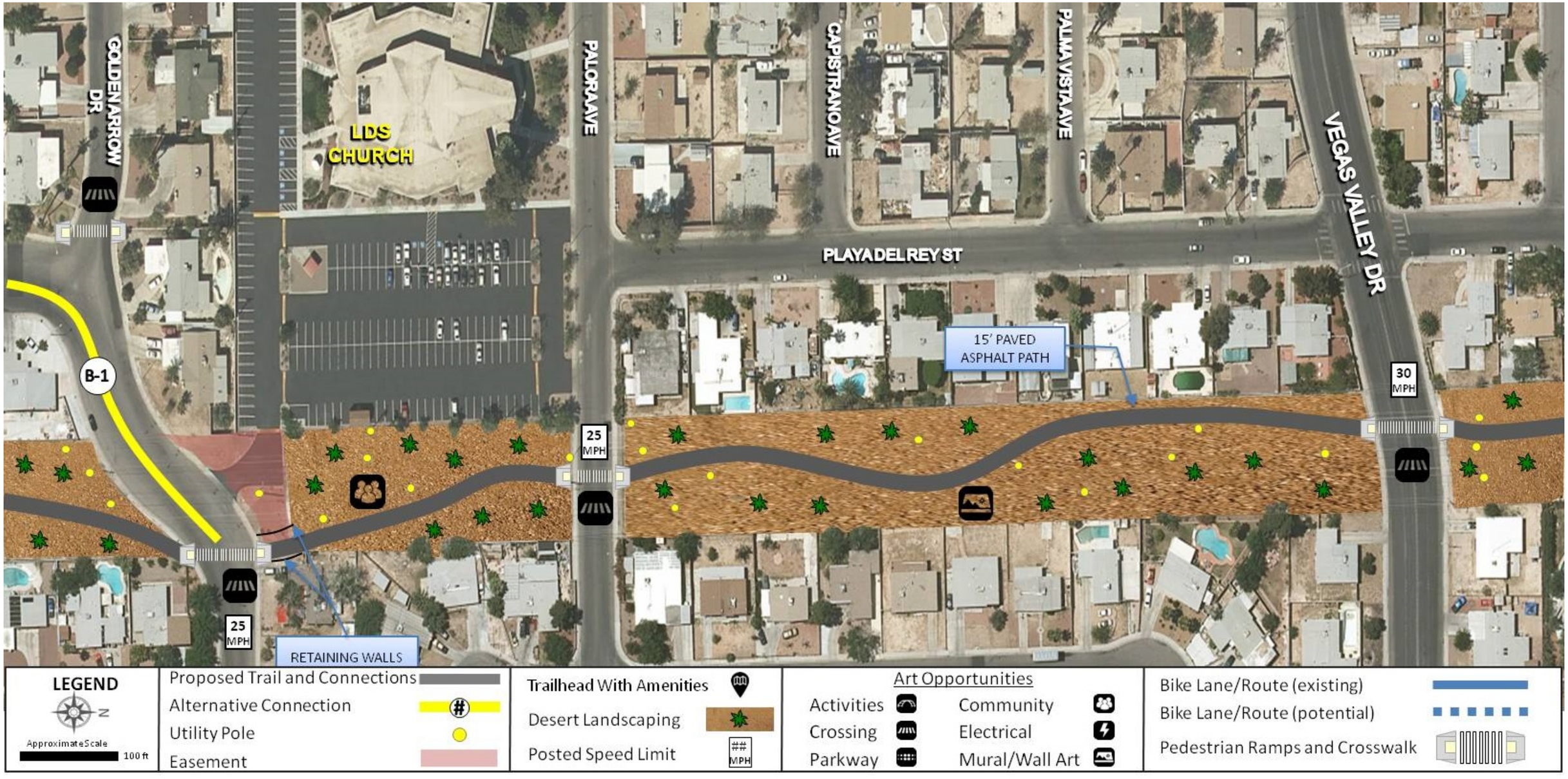



Figure 2-21: Trail Concept Maps - Sheet 6

Figure 2-22: Trail Concept Maps - Sheet 7

Figure 2-23: Trail Concept Maps - Sheet 8

### Spencer Trail Conceptual Plan Maps – Sheets 9 and 10

Plan Map Sheets 9 and 10 cover the trail from Sahara Avenue to Oakey Boulevard. Just north of Sahara Avenue, there is an existing NV Energy substation in the corridor. In front of the substation, facing the street, there is available space for a possible Electrical Art Opportunity, or an interactive educational display promoting NV Energy. The opportunity was presented to NV Energy and they were amenable to the idea, although it would require further review to ensure all requirements are met and there are no conflicts with their operations or plans for improvements at that location. NV Energy staff mentioned they are investigating expanding this substation area further to the north (as shown on Sheet 9). Also safety is a top priority for NV Energy.

Due to the substation, the trail would be diverted for a short segment to Spencer Street. There are existing 5-foot wide sidewalks that could be accessed for this segment and shared markings for bikes could be added to the street supplemented with appropriate trail wayfinding. North of this segment, the 15-foot wide paved asphalt path continues along this section within the utility corridor. This section is identified as a Parkway Art Opportunity. There are additional perpendicular path connections recommended to provide access for users approaching from intersecting streets. The access points should include ramps and pads on both sides of the intersections. Another option would be to align the trail along east side of the corridor closer to the street adjacent to the sidewalk. This would provide better visibility and a shorter distance for users to connect from street intersections. However, there are conflicts with the location of the existing power poles. If poles are consolidated and moved there may be an opportunity to implement this as an alternative.

The plan recommends new pedestrian ramps, crosswalks and advanced warning signs on the trail at St. Louis Avenue. The crossing is near a school zone with a reduced posted speed limit of 25 mph that could be extended to include the new trail crossing. St. Louis Avenue is a two-lane road with a center turn lane. The RTC RBPP Crossing Selection Guidelines indicate an Active Warning Beacon (RRFB) may be considered, but any changes and additional improvements should be coordinated with CCSD and the existing school crossings.

Sahara Avenue is a six-lane roadway with a raised median. It has a posted speed limit of 45 mph with significant traffic volumes. A traffic control device with a pedestrian refuge island would need to be installed at this crossing for trail users. The RTC RBPP Crossing Selection Guidelines indicate a Hybrid Beacon or a PELICAN signal may be considered for an arterial street such as this one.

### Spencer Trail Conceptual Plan Maps – Sheets 11 and 12

Plan Map Sheets 11 and 12 cover the trail from Oakey Boulevard to Charleston Boulevard. The 15-foot wide paved asphalt path continues along this section within the utility corridor.

The proposed area is primarily residential. It also includes the Griffith Community Center north of Oakey Boulevard, Crestwood Elementary School north of Wengert Avenue and a Wells Fargo Bank and a shopping center south of Charleston Boulevard.

The Griffith Community Center currently has a parking lot within the utility corridor. Owners were very enthusiastic about the trail and did not indicate concerns with trading parking spaces for trail use. This area includes two alternatives for the trail alignment and the evaluation details are provided in Table 2-4. For both alternatives, the plan recommends a 6-inch curb to separate the trail from the parking lot users. This location is identified as a Community Art Opportunity. A little further north, a Mural/Wall Art Opportunity is also identified along the property wall of the segment.

Crestwood Elementary School indicated the parking lot is typically fully used and they cannot afford to lose spaces. Therefore construction of a parking lot extension is recommended to provide additional spaces for those lost due to the trail path. The plan recommends a 6-inch curb to separate the trail from the parking lot users. At the north end of the parking lot extension, an additional connection to the school and its playground is recommended for consideration. A trailhead (supplemental option) is recommended just north of Wengert Avenue due to the proximity to the school. The school was in support of this idea and suggested some educational and interactive elements be included in the trailhead for the students. Designers will need to coordinate with CCSD to develop a design that minimizes conflicts with drivers accessing the parking lot, provides good trail connections and ensures safety for all trail users. Consolidation of driveway access points should be

considered to limit conflicts with pedestrians walking on the sidewalk while entering or leaving the school.

This segment of the trail adjacent to the school is also identified as a Community and Wall/Mural Art Opportunity. Additionally, the segment north to Curtis Drive is identified as a Parkway Art opportunity including a Mural/Wall Art Opportunity as well.

The plan recommends new pedestrian ramps, crosswalks and advanced warning signs on the trail at Oakey Boulevard, Bracken Avenue, Wengert Avenue and Curtis Drive. These are relatively low volume traffic crossings with posted speed limits of 25 mph. The plan shows a relocation of the existing Wengert Avenue crosswalk. The existing crosswalk is heavily used by the students during drop-off times and students enter the school at a gate near the crosswalk. However, there is no pedestrian ramp on the south side of the street and no connecting sidewalks on that side either. As mentioned earlier, any changes will need to be coordinated with CCSD.

A major trailhead (preferred option) is recommended just south of Charleston since it is a key northern point for the project. Additionally, there is opportunity for the trailhead to extend the existing parking lot used at the Wells Fargo Bank. This is part of two alternatives outlined in Table 2-5 below.

Although connections north of Charleston are outside the scope of the project, this will be a important consideration. One suggestion that could be further evaluated is an enhanced pedestrian and bike connection to the EPA Bruce Street Complete Streets project located just east of the proposed Spencer Trail. This would likely be a widened sidewalk on the south side of Charleston between the Spencer Trail and the Bruce Street intersection. The crossing at Bruce and Charleston would also need to be evaluated to provide design enhancements for a more comfortable crossing between the two projects.

Table 2-4: Alternatives C: Griffith Community Center Alignment

| Alternative | Name | Segment Length | Existing Conditions | | | | Proposed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ROW (width, owner, etc) | Vehicle Lanes | Speed Limit | Bike Facilities | Improvement | Cost Range $, $$, $$$ | Pros | Cons | Conclusion |
| Trail Path | Utility Corridor | 500 feet | NV Energy | 0 | N/A | None | 15’ path and typical trail elements alongside east edge of utility corridor | $$ | Trail alignment does not divide the corridor into segments as in C-1, crosswalk is at corner where traffic expects crosswalks, does not conflict with parking access | N/A | Preferred alternative |
| C-1 | Utility Corridor | 500 feet | NV Energy | 0 | N/A | None | 15’ path and typical trail elements along west edge of utility corridor | $$ | There is an existing curb cut/ramp at this access point. | Visitors to the building would cross trail between building and parking area; trail would eliminate parking spaces (which could be accommodated further north in the utility corridor) | N/A |

Table 2-5: Alternatives D: Wells Fargo Location

| Alternative | Name | Segment Length | Existing Conditions | | | | Proposed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ROW (width, owner, etc) | Vehicle Lanes | Speed Limit | Bike Facilities | Improvement | Cost Range $, $$, $$$ | Pros | Cons | Conclusion |
| D-1 | Utility Corridor | 500 feet | NV Energy | 0 | N/A | None | 15’ path and typical trail elements alongside east edge of utility corridor | $$$ | Includes additional parking as part of proposed trailhead. | More costly option | Preferred alternative |
| Trail Path | Utility Corridor | 500 feet | NV Energy | 0 | N/A | None | 15’ path and typical trail elements along central area of utility corridor | $$ | Less costly option<br>Softer curves | No additional parking | Secondary option if parking extension is not built. If parking lot is cost prohibitive, there are options for public on-street parking nearby, but then access from these to the trail should be considered in the plan as well as any impacts to residents. |

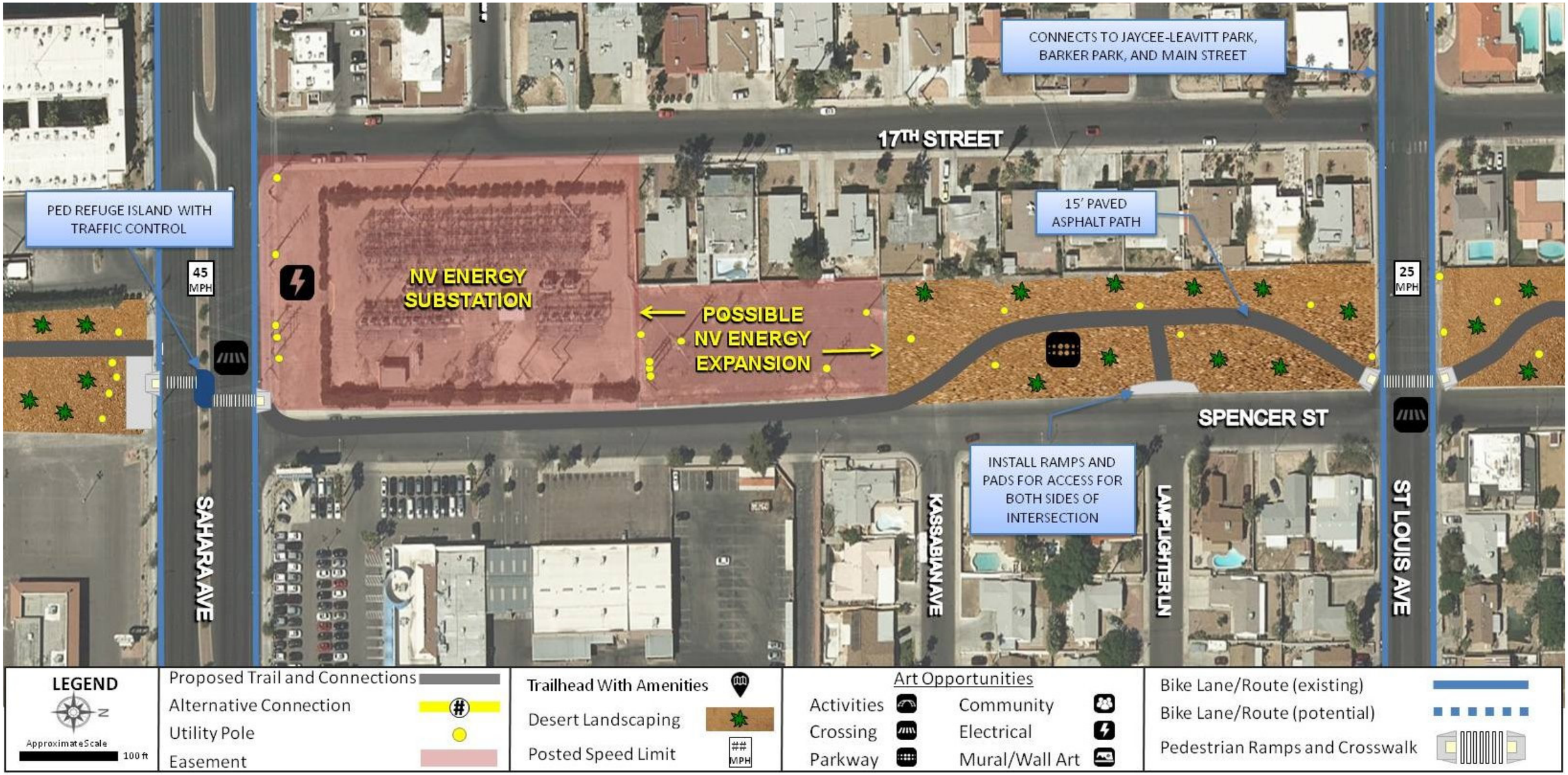



Figure 2-24: Trail Concept Maps - Sheet 9

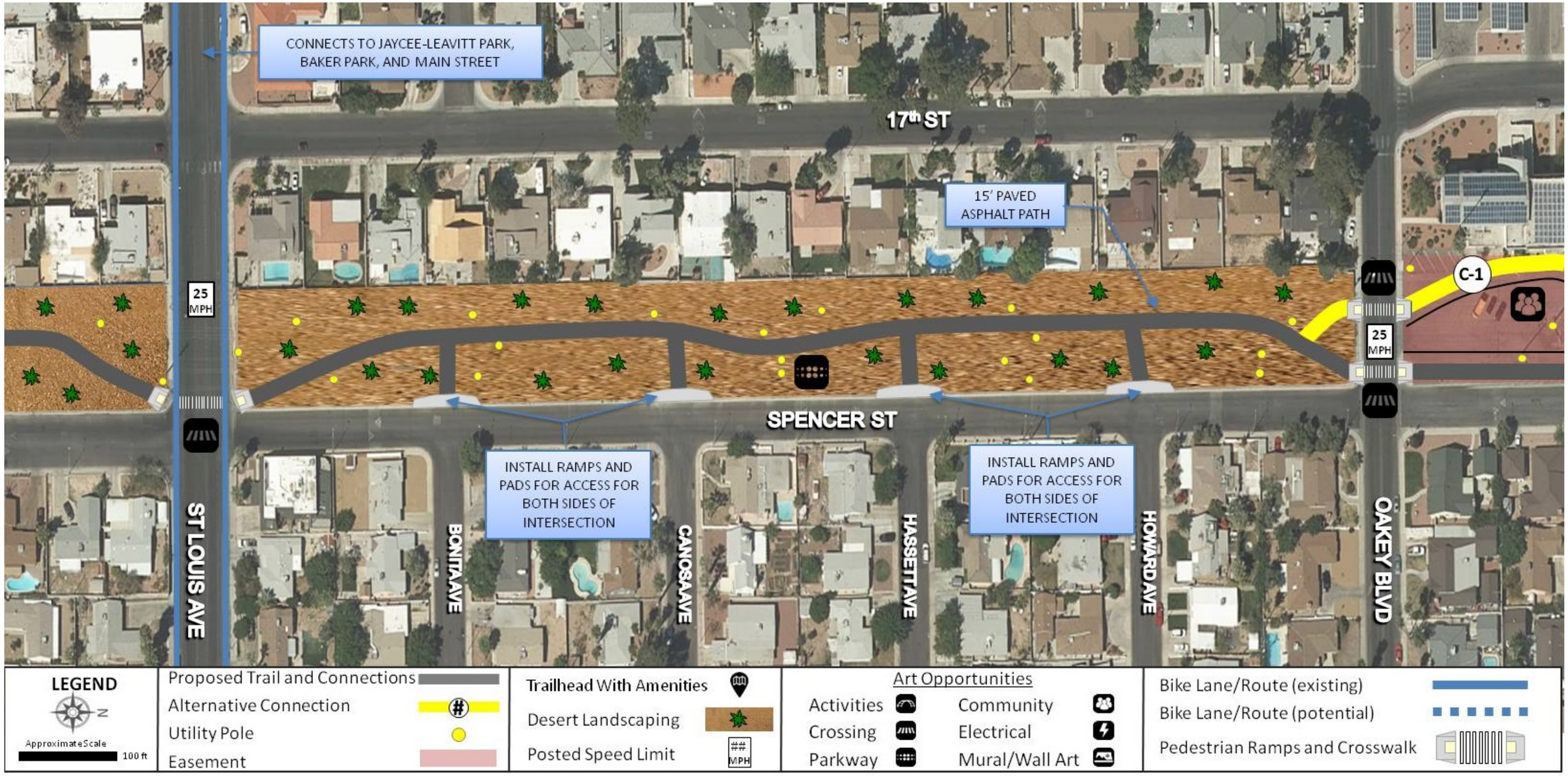



Figure 2-25: Trail Concept Maps - Sheet 10

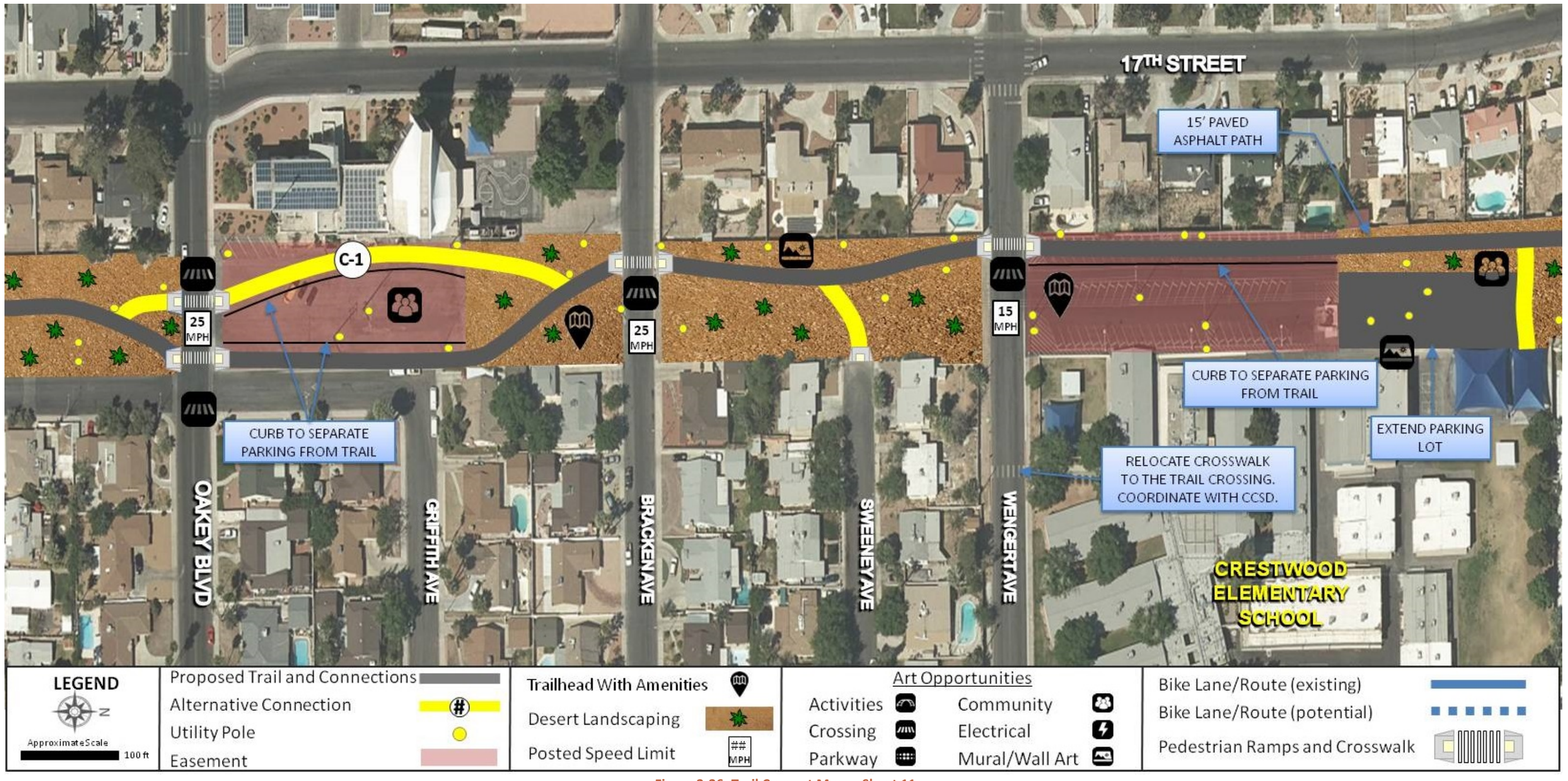



Figure 2-26: Trail Concept Maps - Sheet 11

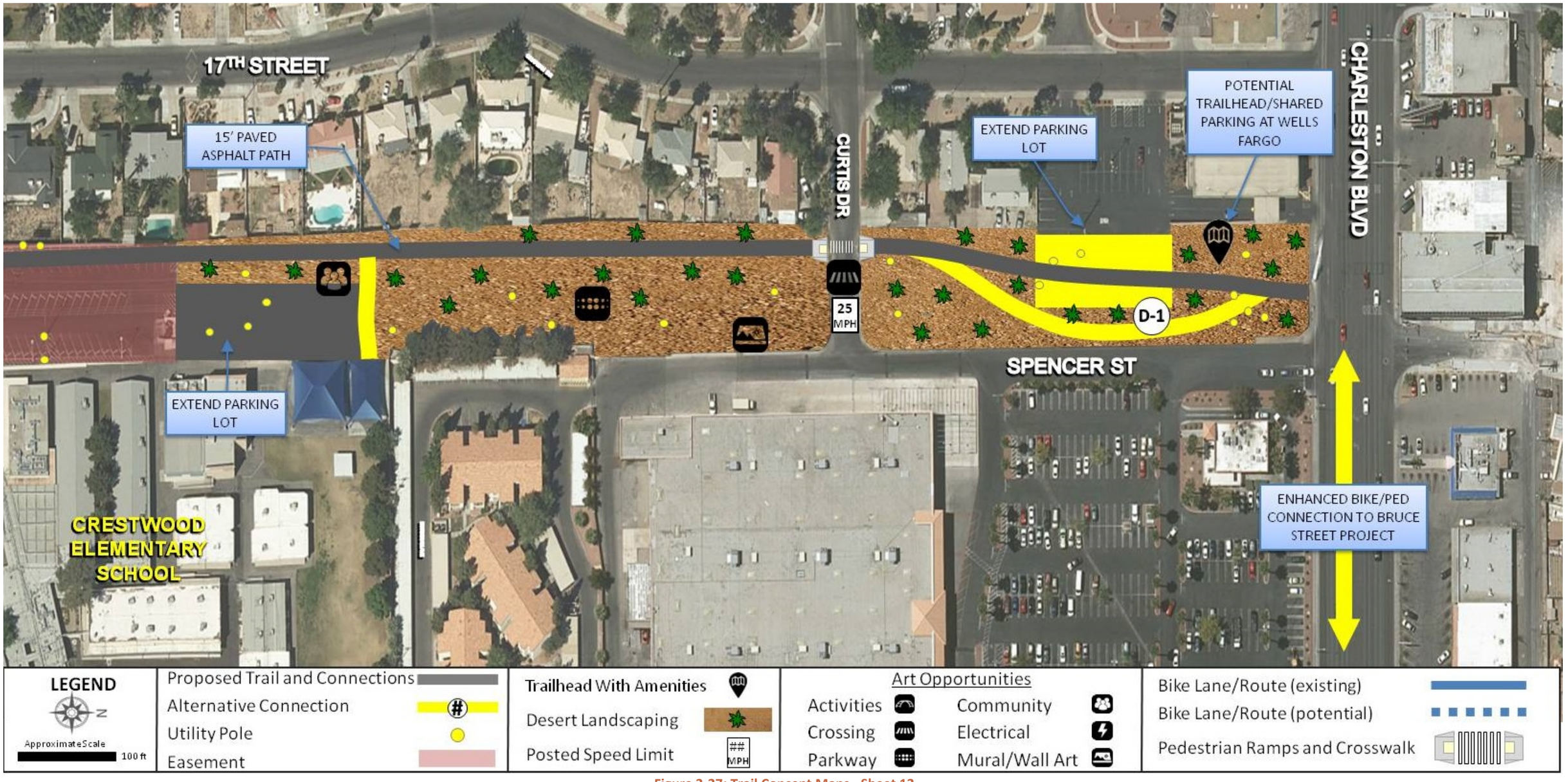



Figure 2-27: Trail Concept Maps - Sheet 12

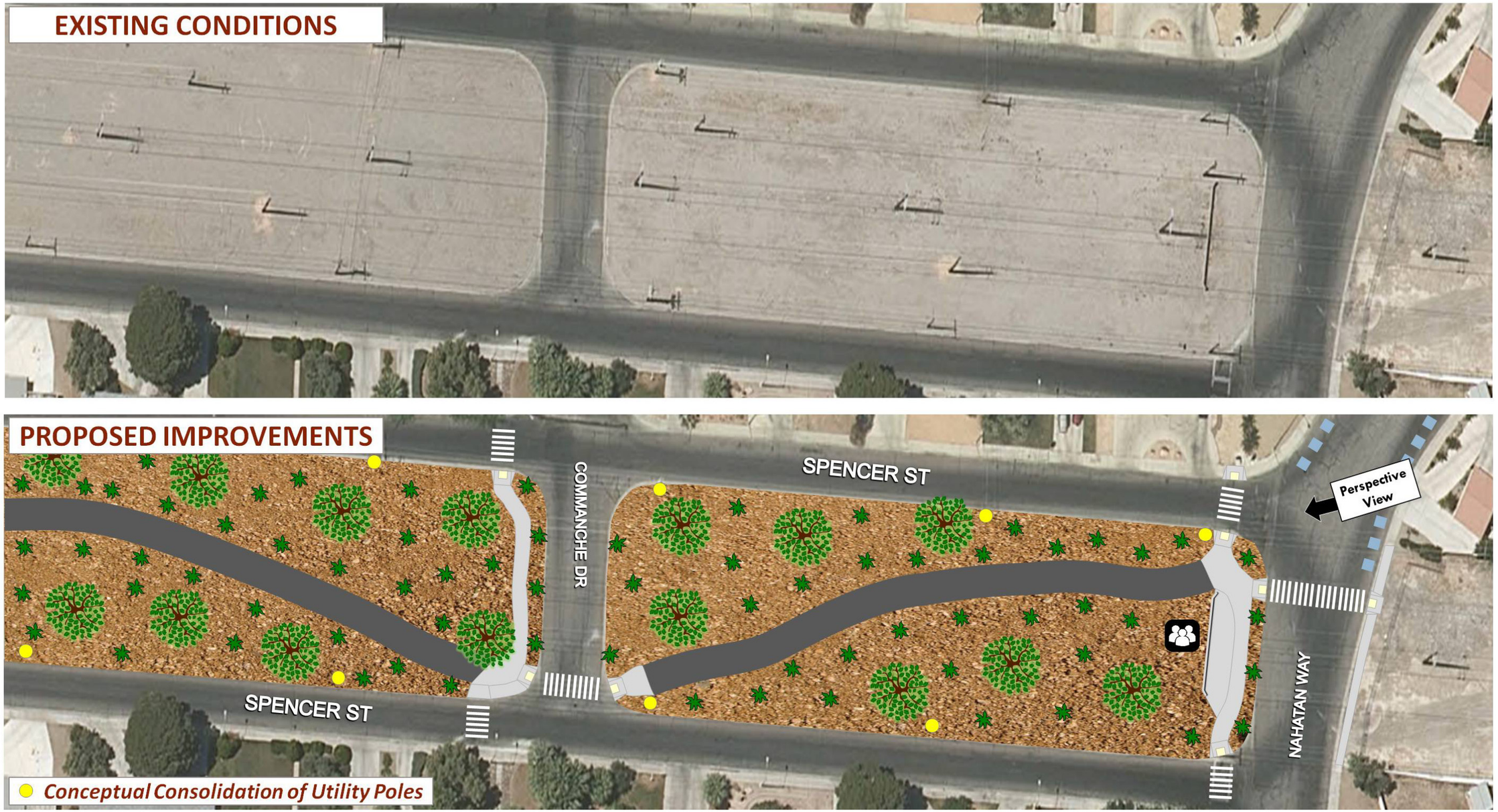



Figure 2-28: Trail Visualization – Plan View

Figure 2-29: Trail Visualization – Perspective View

## 2.4 Implementation

During coordination of this study, City of Las Vegas and Clark County staff agreed to leading the design, construction and maintenance of the trail within their jurisdictions, however, this is dependent on funding availability and acceptable agreements being in place.

The County has completed about 50 miles of multi-use and 8 miles of equestrian trails in the Las Vegas Valley with 23 miles under development County wide.

*"The County trails program is a plan to provide an extensive system of routes that provide outdoor enjoyment and accessibility to County residents. The County's commitment is to build safe, easily accessible, and aesthetically pleasing off-street trails to improve the general quality of life throughout Clark County. These trails offer needed open space and recreation areas to hundreds of people. A primary trail system was cooperatively developed through the Southern Nevada Regional Planning Coalition and Clark County. Las Vegas, North Las Vegas and Henderson are planning and building an extensive network of urban trails in the Las Vegas Valley. This system will create a regional trails network and provide interconnectivity with local neighborhood trails."* – Clark County Parks & Recreation

At the start of this study, the City of Las Vegas offers approximately 104 miles of trails and trail connecting sidewalks for walking, biking and other non-motorized activities. Some of the trail segments feature landscaping, rest areas, benches, lighting, trash cans and pet waste stations. There are also 11 miles of equestrian trails. The Las Vegas City Council's ultimate plan is a 200+ mile trail network that, when completed, will interconnect the Red Rock Canyon National Conservation Area, the outlying northwest and west areas through downtown Las Vegas to the mature east Las Vegas neighborhoods.

Both the County and the City are well equipped for implementation of trail systems in their jurisdictions as they have successfully demonstrated. The next steps for these agencies to take for implementation of this project include:

- Updating agency trail maps to include the Spencer Trail so it is included in programming
- Formalizing agreements
- Identifying funding and project phasing
- Completing design, which should include detailed cost estimates and comprehensive landscaping, wayfinding, and lighting plans. Also completing environmental clearances if federal funds are used for the project.
- Construction
- Operation and Maintenance

### Formalize Agreements

Intergovernmental agreements should be prepared between the City of Las Vegas, Clark County, NV Energy and other entities as needed in order to address project construction, public access, liability, operations and maintenance. Clark County and the City of Las Vegas would typically assume responsibilities related to operations and maintenance of trail improvements within their respective jurisdictions. Additionally, similar to other trail projects within transmission line corridors, an agreement would be developed to address roles, responsibilities and indemnification of liability.

NV Energy is researching with their legal department the type of agreements needed. NV Energy could own the land and enter into an agreement with the local jurisdictions for those entities to construct and maintain the trail. In this case, NV Energy may provide a new trail easement and/or amend existing easements as needed. An alternative may be for NV Energy to transfer ownership of the land to the local jurisdictions, which would in return provide a utility easement to NV Energy. An agreement would need to be executed to allow access to NV Energy. Trail construction and maintenance would typically be the responsibility of the local jurisdictions in either scenario.

### Costs and Funding

#### Estimated Costs

Estimated cost for the project will vary greatly depending on the elements selected for inclusion. Some of the most significant costs on some trails are due to mitigating difficult terrain, pedestrian grade-separated structures, and obtaining right-of-way. These are relatively low impacts for this project, however, other items such as including an expanded trail width (greater than the minimum recommended), trailheads, landscaping, lighting and power pole undergrounding and/or consolidation would increase costs significantly.

The project has been conceptually designed to work without any changes to the current utility infrastructure, such as utility poles and substations. A planning level estimate shows the cost for this option may range between $2 and $5 million (See Appendix 2D for more detail). Preliminary estimates indicate the cost to underground all power lines within the 2.5 mile corridor would be around $50 to $60 million. Another approach discussed with NV Energy that is less costly and more feasible is the option to consolidate poles, as discussed earlier in this report. A conservative planning level cost estimate to complete consolidation for the entire corridor was provided by NV Energy (included in Appendix 2B). These costs may be further reduced depending on the methods implemented, however an engineering study will need to be completed to provide detailed information on alternative approaches along the corridor. Because there are several unknown and complicated variables, this study would require 6 to 8 weeks to complete and would require the requesting agency execute an Engineering Study Agreement with NV Energy to cover staffing costs of the effort.

## Phasing and Funding Options

The full corridor as described in this study can be implemented in phases depending on funding availability and stakeholder priorities. There are various approaches that could be taken for phasing options. For example, certain segments of the corridor having key connections could be implemented first. Another approach is to phase improvements along the trail by adding new amenities or landscaping as funding becomes available. Additionally, due to the potential costs associated with undergrounding or consolidating utility poles, it is recommended this improvement be prioritized and phased as part of the project development.

Trail funding for both agencies is typically provided by the Bureau of Land Management through the sale of public lands as authorized by the Southern Nevada Public Land Management Act (SNPLMA). This act keeps money from Nevada federal land sales in the state for parks and trail projects. The County and City would seek SNPLMA funding in future rounds to complete the design and construction phases of their respective segments. If SNPLMA money is used to implement the trail plan, eminent domain cannot be used if any right of way issues arise.

Stakeholders may also seek funding from the following potential sources:

- RTC/City of Las Vegas/ Clark County Partnership – joint Federal Grant application. Federal funds (Transportation Alternatives Program (TAP), Fixing America's Surface Transportation Act or "FAST Act", Recreational Trails Program, Congestion Mitigation and Air Quality Improvement Program)
- Agency funding for streets and crossings within their jurisdictions
- Sponsorship opportunities, for example from local businesses
- Non-Profit Organization, Charity and/or Community Groups
- NV Energy Foundation

## Non-Profit Organization Approach

An alternative option for implementing the project would be for a non-profit organization to form a partnership with the agencies. This organization could contribute to many aspects of the project including oversight and funding for design, construction, operation and maintenance. One advantage with a non-profit organization is that it may be able to apply more stringent guidelines for access and incorporate more frequent programming. This could be an existing non-profit organization with related interests such as the Outside Las Vegas Foundation (OLVF), which has partnered previously with NV Energy. This could also be a non-profit organization newly formed specifically for this project. There are several examples where these approaches have been successful. One notable example is the High Line project highlighted below.

**The High Line – Example of a Non-Profit Project Success Story**

The High Line is a linear public park about 1.5 miles long built on a historic freight rail line elevated above the streets on Manhattan's West Side in New York City. Although it is owned by the City of New York, the High Line is maintained, operated, and programmed by Friends of the High Line, in partnership with the New York City Department of Parks & Recreation.

Friends of the High Line is a private non-profit conservancy that raises 98% of the High Line's annual budget. The organization was initially formed in 1999 as a small community group to advocate for preservation of the unused, deteriorating rail line when the historic

structure was under the threat of demolition. The organization rallied public support for the park and filed a request with the United States Surface Transportation Board to create a public trail on the site. Friends of the High Line also played a major role in the visual aesthetics holding a competition in conjunction with the city of New York to determine the design team that would lead the project. Since the park's opening in 2009, Friends of the High Line has held a licensing agreement with the New York City Department of Parks & Recreation to serve as its primary steward. As part of the agreement, Friends of the High Line is responsible for the daily operations and maintenance of the park, which amount to more than $5 million a year. The organization has done this through volunteer efforts, private donations, memberships, the sale of park-branded merchandise, special events and other fundraising efforts.

Figure 2-30: Photo along the High Line Linear Park

**NV Energy Foundation**

One highly relevant funding source the project team identified is the NV Energy Foundation. NV Energy maintains the foundation for the purpose of supporting philanthropic efforts and it actively supports improvements in the quality of life in the communities NV Energy serves. The NV Energy Foundation administers grants in support of projects that benefit four major areas: Education & Youth; Arts & Multicultural; the Environment; and Health and Human Services. Applications for these grants need to be submitted by a non-profit organization. The objectives of this foundation are highly applicable to the Spencer trail project.

*"The NV Energy Foundation is committed to supporting the diverse communities in which it operates. We take this commitment very seriously by actively participating in community involvement in three ways — philanthropy, civic leadership and volunteerism. Giving back to the communities where we operate makes them better places to live and work, and in turn makes them better places to do business. We support the community through financial contributions as well as through community service*." – NV Energy Foundation website: https://www.nvenergy.com/community/funding/foundation/

**Objectives of the NV Energy Foundation**

- Fund significant programs or initiatives that have lasting, positive impacts in the communities we serve
- Tie funding more closely to NV Energy's business purpose
- Strengthen relationships with nonprofit organizations and the community at large
- Include the potential for collaborations with other organizations or businesses
- Provide higher visibility and recognition opportunities for the NV Energy Foundation
- Support quality of life indicators
- Fund initiatives with measurable outcomes and a high degree of funding accountability
- Include the potential for employee volunteer involvement

## Conclusion

The purpose of this report is to provide a conceptual plan that highlights base information from which local jurisdictions may choose to take the next steps towards implementation. Through an extensive outreach effort, the study also demonstrated there is exceptional public support for the project. The proposed Spencer Trail provides a great prospect for key partnerships and an outstanding opportunity to transform an existing barren utility corridor into a beautiful legacy project that will be thoroughly enjoyed by the communities of Southern Nevada.

SPENCER GREENWAY TRAIL
& UNLV CAMPUS BIKE PLAN

# Section 3

# UNLV CAMPUS BIKE PLAN

# SECTION 3:

# UNLV Campus Bike Plan

## 3.1 INTRODUCTION

The UNLV Parking and Transportation Services Department submitted a proposal to the RTC to develop a campus plan that identifies bicycle routes and trails to the UNLV campus, establishes on-campus bicycle routes, and provides safe and effective bike parking while on the campus. Community outreach strongly demonstrated that implementation of the bike plan will increase bike riding directly on campus as well as encourage more people to ride bikes when traveling to campus from outside origins.

As can be seen in the student distribution graphic in Figure 3-1, many students live in areas more than 5 miles outside the campus. The most attractive trip by bike is under 15 minutes or 3 miles, and therefore the longer distance to commute by bike to UNLV is challenging. However, the RTC is also finalizing a Regional Bicycle and Pedestrian Plan which makes recommendations for improving access and comfort for bike connections to regional destinations such as the UNLV Main Campus. Encouraging campus commuters to ride bikes instead of driving cars will help reduce increasing pressure on vehicle parking lots and garages, where space is limited.

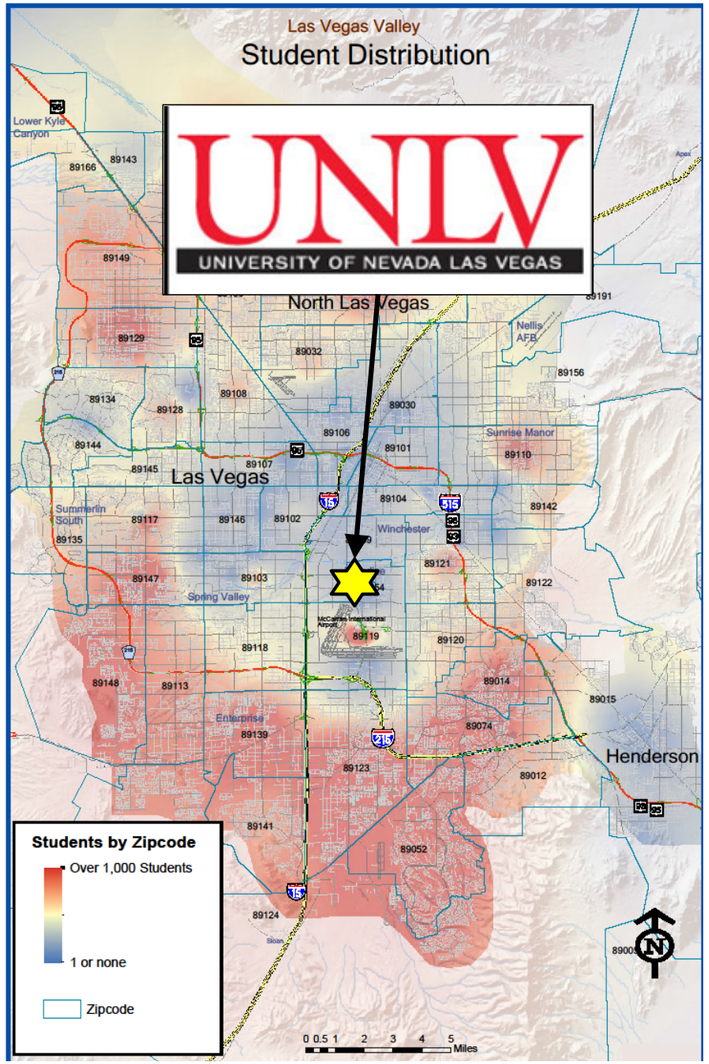



Figure 3-1: Distribution of Student Residence

Figure 3-2: Parking Challenge On and Around UNLV Campus

The following steps outline the overall plan development process included in this study.

1. Identify existing conditions and facilities already being proposed by other projects on and adjacent to campus.
2. Conduct community outreach and survey to identify desire for improvements, types of improvements, and locations for improvements.
3. Review bike plans implemented by other universities and highlight best practices.
4. Prioritize entry points of campus and destinations on campus.
5. Propose routes to create a network connecting those origins and destinations.
6. Propose amenities to support the network.
7. Outline next steps for implementation and success.

## 3.2 Plan Development Process

### Existing Conditions

The University of Nevada, Las Vegas (UNLV) is a public university of almost 30,000 students located in the Las Vegas suburb of Paradise, Nevada. The 332-acre campus is located approximately 1.5 miles east of the Las Vegas Strip. The main campus is generally located within the boundaries created by Flamingo Road, Maryland Parkway, Tropicana Avenue and Swenson Street. UNLV also includes a Shadow Lane Campus located to the north, however, this study will focus only on the main campus.

### Bike and Transit Connections

Existing and proposed facilities directly within or connecting to the campus include:

- Existing widened bike/bus shared lanes along Flamingo Road.
- Existing bike lanes along Harmon Avenue on the east side of campus.
- Existing bike lanes on Wilbur Street south of campus.
- Existing bus transit routes along Flamingo Road, Swenson Street, Tropicana Avenue, and Maryland Parkway.
- Proposed bike lanes along Maryland Parkway as part of the high capacity transit project.
- Proposed bike lanes along Swenson Street as part of the RTC's Regional Bicycle and Pedestrian Plan. This includes separated bike lanes north of Harmon Avenue and standard bike lanes south of Harmon.

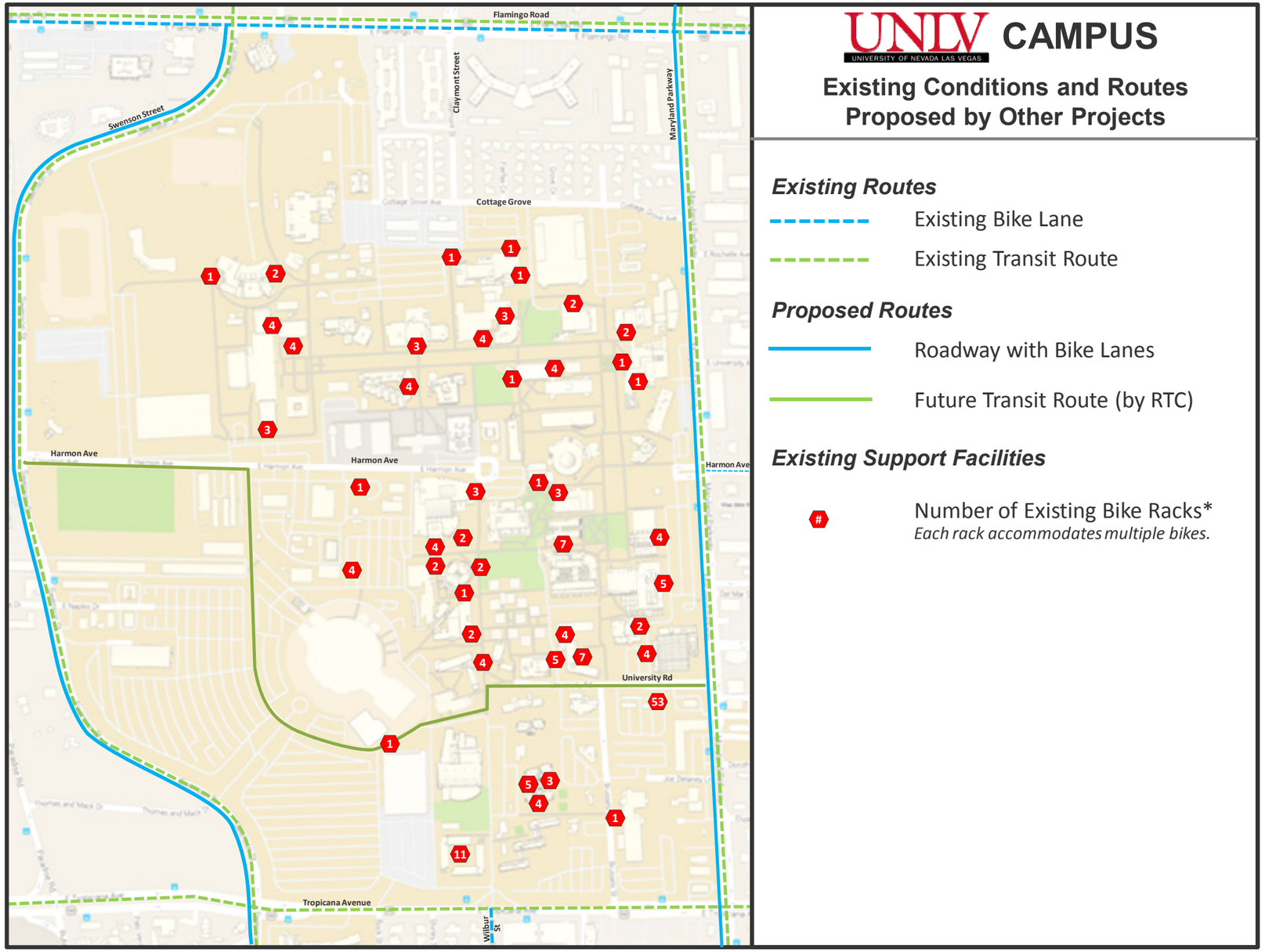



Figure 3-3: Existing Conditions and Routes Proposed by Other Projects

- Future transit route along Harmon Avenue from the west side of campus, heading south along Tarkanian Way around the Thomas & Mack Center and connecting to Maryland Parkway via University Road.

## Existing Bike Routes and Bike Parking

Currently the campus does not include any officially-designated bike routes. However, the campus does include numerous walkways varying from standard sidewalks to paths wider than 20 feet. These paths typically have a wide mix of users and modes. For example, users can vary from students, staff, vendors, visitors, couriers to emergency response personnel. Modes vary from walking, bicycles, skateboards, golf carts to different types of trucks. Some areas have restrictions of modes, but there currently are no facilities that separate cyclists within a dedicated space.

Figure 3-4: Typical Busy Corridor on UNLV Campus

In November 2013, UNLV conducted an inventory of current bike racks and their usage over several days during school sessions. This survey showed that UNLV currently provides 190 bike racks across campus which accommodate an estimated 512 bikes (see Table 3-1:

Table 3-1: Bicycle Racks ad Usage

| Bicycle Racks and Usage *Updated 11-5-2013* | | | | | |
|---|---|---|---|---|---|
| Rank | LOCATION | BIKES ACCOMODATED | RACKS | AVERAGE DEMAND | PERCENT OCCUPIED |
| 1 | DAYTON DORMS | 23 | 11 | 11 | 47.83% |
| 2 | EAST ENTRANCE OF LIBRARY | 11 | 3 | 9 | 81.82% |
| 3 | SOUTH OF WRI | 20 | 7 | 7 | 35.00% |
| 4 | EAST OF CBC | 11 | 2 | 6 | 54.55% |
| 5 | EAST OF UNION | 11 | 5 | 5 | 45.45% |
| 6 | WEST OF TONOPAH DORMS | 11 | 5 | 5 | 45.45% |
| 7 | SOUTH OF TBE | 9 | 4 | 5 | 55.56% |
| 8 | NORTH OF CEB | 9 | 4 | 4 | 44.44% |
| 9 | SOUTHEAST OF LIBRARY | 7 | 2 | 3 | 42.86% |
| 10 | EAST OF TONOPAH DORMS | 16 | 7 | 3 | 18.75% |
| 11 | FAIMAN DORMS NEXT TO RESIDENT LOT B | 11 | 5 | 3 | 27.27% |
| 12 | NORTH OF TONOPAH DORMS | 9 | 4 | 3 | 33.33% |
| 13 | SOUTH OF WHI | 7 | 3 | 3 | 42.86% |
| 14 | SOUTH OF LIBRARY | 9 | 4 | 2 | 22.22% |
| 15 | NORTH OF LAW LIBRARY | 7 | 3 | 2 | 28.57% |
| 16 | NORTH OF FINE ARTS | 5 | 2 | 2 | 40.00% |
| 17 | SOUTH OF FINE ARTS | 3 | 1 | 2 | 66.67% |
| 18 | FAIMAN DORMS NEXT TO VOLLEYBALL CT. | 7 | 3 | 2 | 28.57% |
| 19 | EAST OF SSC | 24 | 4 | 2 | 8.33% |
| 20 | EAST OF LIED ATHLETIC | 5 | 2 | 2 | 40.00% |
| 21 | NORTH OF CBC | 11 | 2 | 1 | 9.09% |
| 22 | NORTH OF WRI | 7 | 3 | 1 | 14.29% |
| 23 | WEST OF CEB | 3 | 1 | 1 | 33.33% |
| 24 | WEST OF FINE ARTS | 3 | 1 | 1 | 33.33% |
| 25 | EAST OF BOOKSTORE | 5 | 2 | 1 | 20.00% |
| 26 | SOUTH OF MPE | 7 | 3 | 1 | 14.29% |
| 27 | EAST OF SEB | 5 | 1 | 1 | 20.00% |
| 28 | PUBLIC SAFETY BUILDING | 3 | 1 | 0 | 0.00% |
| 29 | SOUTH OF COMPUTING SERVICES | 4 | 1 | 0 | 0.00% |
| 30 | EAST OF FDH | 9 | 4 | 0 | 0.00% |
| 31 | WEST OF URBAN AFFAIRS | 19 | 4 | 0 | 0.00% |
| 32 | TRANSIT CENTER | 110 | 53 | 0 | 0.00% |
| 33 | WEST OF ACHITECTURE | 5 | 1 | 0 | 0.00% |
| 34 | FAIMAN DORMS SOUTH SIDE | 9 | 4 | 0 | 0.00% |
| 35 | SOUTHEAST OF CBC | 9 | 2 | 0 | 0.00% |
| 36 | MIDDLE OF CBC | 3 | 1 | 0 | 0.00% |
| 37 | WEST OF CBC BY THUNDER | 21 | 4 | 0 | 0.00% |
| 38 | NORTH OF TROPICANA GARAGE | 6 | 1 | 0 | 0.00% |
| 39 | WEST OF LIED ATHLETIC | 5 | 1 | 0 | 0.00% |
| 40 | SOUTH OF SPORTS INJURY RESEARCH CENTER | 9 | 4 | 0 | 0.00% |
| 41 | NORTHEAST OF MPE | 9 | 4 | 0 | 0.00% |
| 42 | EAST OF BIGELOW PHYSICS BUILDING | 9 | 4 | 0 | 0.00% |
| 43 | NORTHWEST OF SEB | 5 | 1 | 0 | 0.00% |
| 44 | NORTHEAST OF SEB | 5 | 1 | 0 | 0.00% |
| 45 | EAST OF TBE | 7 | 3 | 0 | 0.00% |
| 46 | NORTH OF CONCERT HALL | 9 | 2 | 0 | 0.00% |
| | **TOTALS** | **512** | **190** | **88** | |

Bicycle Racks ad Usage. The majority of these are the wave form of bike rack which is not an AASHTO-approved type of rack because it does not support bikes at two points of contact. Some newer locations, such as at the Transit Center, do include AASHTO-approved bike racks (see Figure 3-5 below).

Figure 3-5: AASHTO-Approved Bike Racks at UNLV Transit Center

UNLV does not currently have a design or policy standard for wayfinding signage or lighting on campus. The current wayfinding sign system uses acronyms that are challenging even for veteran students and especially for those not already familiar with the buildings. The Implementation section of this report includes the recommendation to develop a comprehensive wayfinding standard and policy for the campus.

## Community Outreach Survey Results

A detailed description of the outreach for both projects is included in Section 1: introduction. A bilingual on-line survey was created to determine the level of support for the project and solicit feedback on priorities and the elements desired for the projects. The survey was live on March 10, 2016, included both English and Spanish versions, and closed June 15, 2016. Nearly 1,000 total responses were received from the community. **Out of these, approximately 340 responses were provided from participants directly on UNLV campus.** The full survey questions and results are located in Appendix 1C. Below are highlights of the survey results related to the UNLV Campus Bike Plan project.

- Great opportunity to encourage increased bike riding on campus. More than 70% of those surveyed said if UNLV provided secure and convenient bike parking on campus, this would this increase their interest in riding a bike to UNLV.
- More than 40% ride a bike on campus
    - 19% bike at least once a week
    - 22% bike at least few times a year
- Good opportunity for improvements, only 16% of respondents rate the current biking conditions on the UNLV campus as good or excellent
- Nearly 70% of those respondents riding on campus access UNLV from east or south
- <u>Top 3 Desired Improvements</u> <u>for enhanced biking conditions on UNLV campus are as follows:</u>
    1. Separate and dedicated bike paths
    2. More bike paths on campus and more connected bike routes
    3. Improved bike parking options
- <u>Top 3 Desired Criteria for bike parking on the UNLV campus</u>
    1. Secure bike parking with greater protection from theft, vandalism and weather
    2. Low cost options for bike parking
    3. Greater number of bike parking locations
- <u>Top 6 desired locations for bike parking or bike sharing:</u>
    1. Library
    2. Student Union
    3. Recreation & Wellness Center
    4. Classroom Building Complex
    5. Transit Center
    6. North Side: *Science, Engineering and Cottage Grove Ave. (From survey comments)*

Figure 3-6: Most Evident Concern with Biking on Campus is Bike Theft

## Successful Bike Plans by Other Universities

Although improved facilities will go a long way, a successful campus bike plan is about much more than just infrastructure. One common characteristic among all of the most successful campus bike plans was the effort to achieve a Bicycle Friendly University status with the League of American Bicyclists.

THE ESSENTIAL ELEMENTS OF A BICYCLE FRIENDLY AMERICA

"Each Bicycle Friendly University recognized by the League is different. Each with their own natural benefits and challenges — from climate and topography to culture and population density. But there are essential elements across five categories — known as the Five E's — that are consistent in making great places for bicycling." - League of American Bicyclists.

### THE 5 E'S

- Engineering: Creating safe and convenient places to ride and park
- Education: Giving people of all ages and abilities the skills and confidence to ride
- Encouragement: Creating a strong bike culture that welcomes and celebrates bicycling
- Enforcement: Ensuring safe roads for all users
- Evaluation & Planning: Planning for bicycling as a safe and viable transportation option

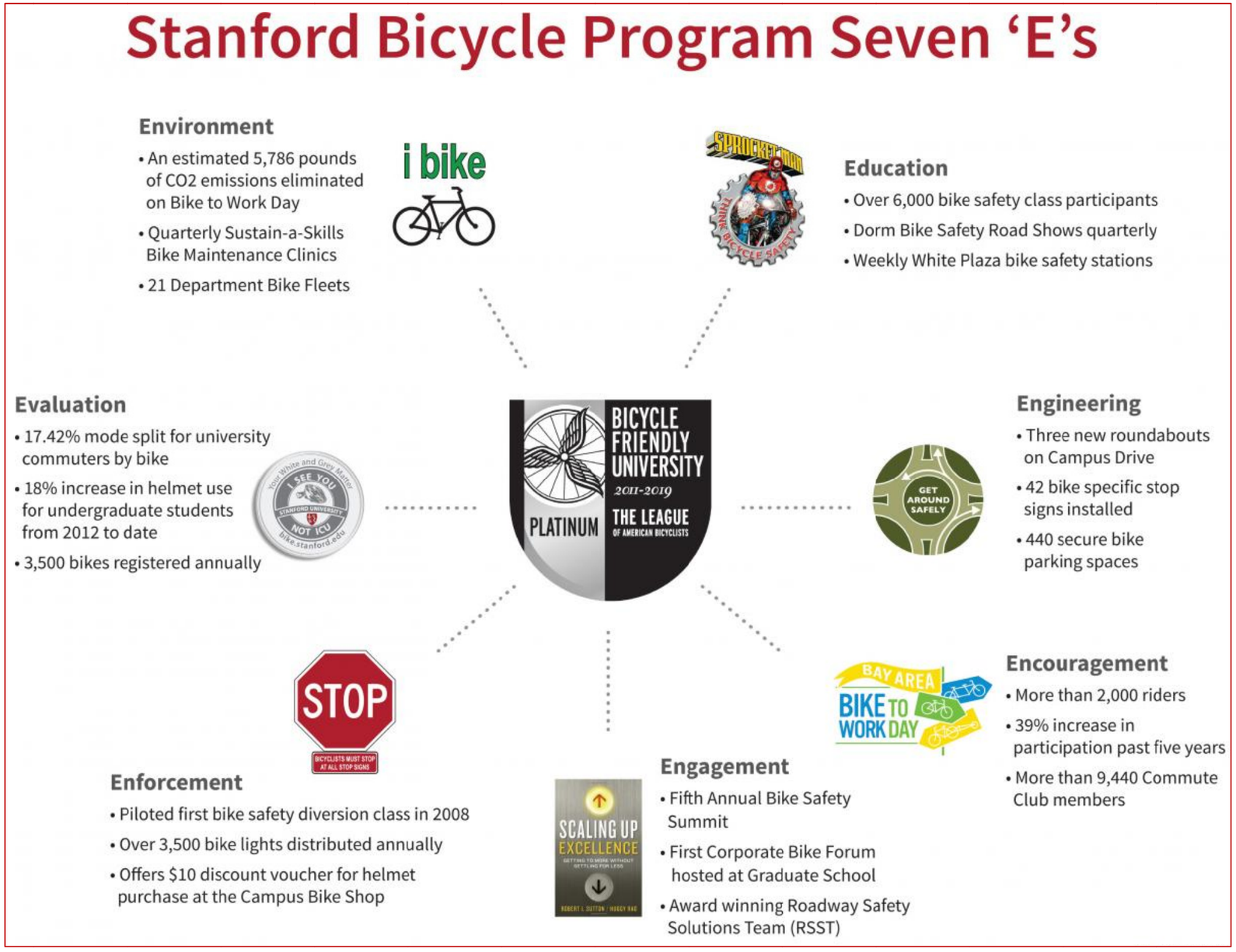

Stanford Bicycle Program Seven 'E's
Environment
• An estimated 5,786 pounds of CO2 emissions eliminated on Bike to Work Day
• Quarterly Sustain-a-Skills Bike Maintenance Clinics
• 21 Department Bike Fleets
i bike
Education
• Over 6,000 bike safety class participants
• Dorm Bike Safety Road Shows quarterly
• Weekly White Plaza bike safety stations
Evaluation
• 17.42% mode split for university commuters by bike
• 18% increase in helmet use for undergraduate students from 2012 to date
• 3,500 bikes registered annually
I SEE YOU
NOT ICU
bike.stanford.edu
BICYCLE FRIENDLY UNIVERSITY
2011-2019
PLATINUM
THE LEAGUE OF AMERICAN BICYCLISTS
Engineering
• Three new roundabouts on Campus Drive
• 42 bike specific stop signs installed
• 440 secure bike parking spaces
GET AROUND SAFELY
STOP
BICYCLISTS MUST STOP AT ALL STOP SIGNS
Enforcement
• Piloted first bike safety diversion class in 2008
• Over 3,500 bike lights distributed annually
• Offers $10 discount voucher for helmet purchase at the Campus Bike Shop
SCALING UP EXCELLENCE
Engagement
• Fifth Annual Bike Safety Summit
• First Corporate Bike Forum hosted at Graduate School
• Award winning Roadway Safety Solutions Team (RSST)
BAY AREA BIKE TO WORK DAY
Encouragement
• More than 2,000 riders
• 39% increase in participation past five years
• More than 9,440 Commute Club members

Figure 3-7: Stanford Bike Program 7-E's

## Platinum-Level Bicycle Friendly Universities

Currently, there are five Platinum-level Bicycle Friendly Universities in the U.S. and below are some of their highlights for achieving this status:

### *Stanford University*

- More than 21% of the university community bikes daily.
- Implements a Seven 'E's category bike program (see Figure 3-7 on previous page)
- Created a Commute Buddy program that pairs experienced bike commuters with newbies who need help getting started.
- Offers access to showers and lockers for bicyclists.
- Offers free classes to accommodate even those who have no biking experience or bike citation diversion classes for cyclists who get ticketed.
- Bike shop offers bike repair clinics.
- If a bicyclist is cited, they can take the Bike Safety & Bike Diversion Class.
- A cycling team promotes safe, recreational cycling and participates in regular competitions.
- Features 38 miles of bike paths around campus.

### *University of California, Davis*

- 45% of UCD's students, faculty and staff have a bike on campus each day
- DIY bike repair and maintenance
- Offers bike classes
- Provides commuter showers and lockers
- Maps and directions created just for campus bikers
- Invented a campus bicycle roundabout, which is now used at other schools to handle the large number of bicyclists on campus.
- 76 rental bike locker spaces are available in four locations on campus. Lockers provide users with additional security and protection from the weather.

"*Most bike paths are really multi-use paths, also referred to as "shared use" paths in the AASHTO Guide. In other words, cyclists often share these paths with pedestrians, joggers, skaters, dog walkers and the like. With the volume of bicycle use at UC Davis, mixing cyclists and non-cyclists at certain times of the day, particularly peak-use times, increases the risk of collisions. As a result, many campus bike paths are paralleled by separate pedestrian facilities, and that is the preferred design standard and should be followed in any future construction.*"

*- University of California, Davis Bike Plan*

### *Colorado State University*

- More than 23,600 bikes registered to be on campus on any given day.
- The Campus Bike Advisory Committee's mission is to promote a safe and enjoyable bicycle experience through awareness, planning and education. Works to make sure that the needs of cyclists are met with every new development and rule on campus.
- Invested greatly in biking infrastructure, including 15,000 bike racks to support commuters
- More recent iteration of the bicycle network is the conversion of some former streets into separated bicycle and pedestrian paths.

Figure 3-8: Colorado State University Separated Bicycle Path

### *University of Minnesota, Twin Cities*

- Participate in a bike commuter program which provides an incentive for cyclists. Cyclists receive prizes for biking around campus. The program uses RFID hardware and software – which is an automated bike commuting recognition system developed at the University of Minnesota.

### *Portland State University*

- Portland State partners with the city of Portland and other businesses to enable and support a biking culture
- Bike share system with 1,000 bikes at 100 stations across the central city and close-in neighborhoods.
- On-campus bike shop for students & employees. They offer short-term bike rentals to students and the general public.
- "The Bike Hub" also runs a program for faculty and staff which provides a free commuter bicycle.
- Provides multiple covered bike garages where you can park your bicycle and keep it dry, as well as use free repair stands.
- Features several biking opportunities including a free bike to breakfast event to help promote a biking culture.
- Bicycle safety classes help educate students on biking safety. A year-round course gets riders comfortable with riding and teaches maintenance and basics of biking regulations.

## Other Notable Campuses and Bike Program Features

### *University of North Carolina – Chapel Hill*

- A Silver-level Bicycle Friendly University
- Developed a Bicycle Master Plan "with the goal of making cycling an integral part of UNC culture."
- Features biking maps to educate riders on biking locations.
- Bike riders participating in the Commuter Alternative Program have opportunities to win prizes and enjoy discounts for choosing to forego the parking permit.
- Includes a campus bike share program, allows students and faculty to check out bikes for rental.

### *Temple University*

- A Bronze-level Bicycle Friendly University

### *Columbia University*

- A Bronze-level Bicycle Friendly University
- Public safety officers issue bike locks at discounted rates and educate bicyclists on safety and regulations.
- The cycling team competes in collegiate and USCF races and is open to full-time students of Columbia University.

### *The University of Texas – Austin*

- A Bronze-level Bicycle Friendly University
- Bike Fix-It Stations and bike pumps are located throughout the campus.
- 40 miles of bike paths around sprawling campus.
- University bike hub is a one-stop-shop for all biking needs.
- Community bike shop, staffed by volunteers. Rent a bike on a daily basis or for the entire semester.
- Campus recreational and competitive team, taking regular group trips and participating in racing events.

## Prioritize Origins and Destinations

Before identifying routes for improvement within campus, it is important to understand the primary origins (or entry points) and destinations.

## Primary Points of Entry

The primary points of entry were determined by two general methods. One was through the community outreach effort including the survey. As highlighted in the previous section, the survey results indicate approximately 70% of those riding on campus will likely access UNLV from the east or south side, with the north side being ranked third.

The second method used to supplement this analysis was collecting pedestrian and bicycle counts at key locations around campus. In collaboration with the Stakeholder Advisory Committee (SAC), ten locations were selected around the campus boundaries as shown in the map below. The counts were performed at peak morning and afternoon hours while school was in session. A detailed record of the counts is located in Appendix 3B and a summary table is also shown within Figure 3-9.

The summary table lists the ten locations and the total number of pedestrians and cyclists. When a campus makes key improvements to its bike facilities, it is safe to assume there will be a mode shift at some level. In other words, some of the other modes, including pedestrians, will convert to biking due to the improved facilities. In order to determine a general idea of ranking for each location, the table below assumes 10% of pedestrians will convert to using bicycles with implementation of the proposed bike plan. This assumption is not intended to forecast the actual mode shift conversion expected to occur. The conversion can vary greatly

depending on many factors and this evaluation is outside the scope of the study.

Based on counts, the results show that the majority of potential bicycle traffic would occur from the east and north sides, with the south side being ranked third. This is consistent with the information received through the community outreach effort as well.

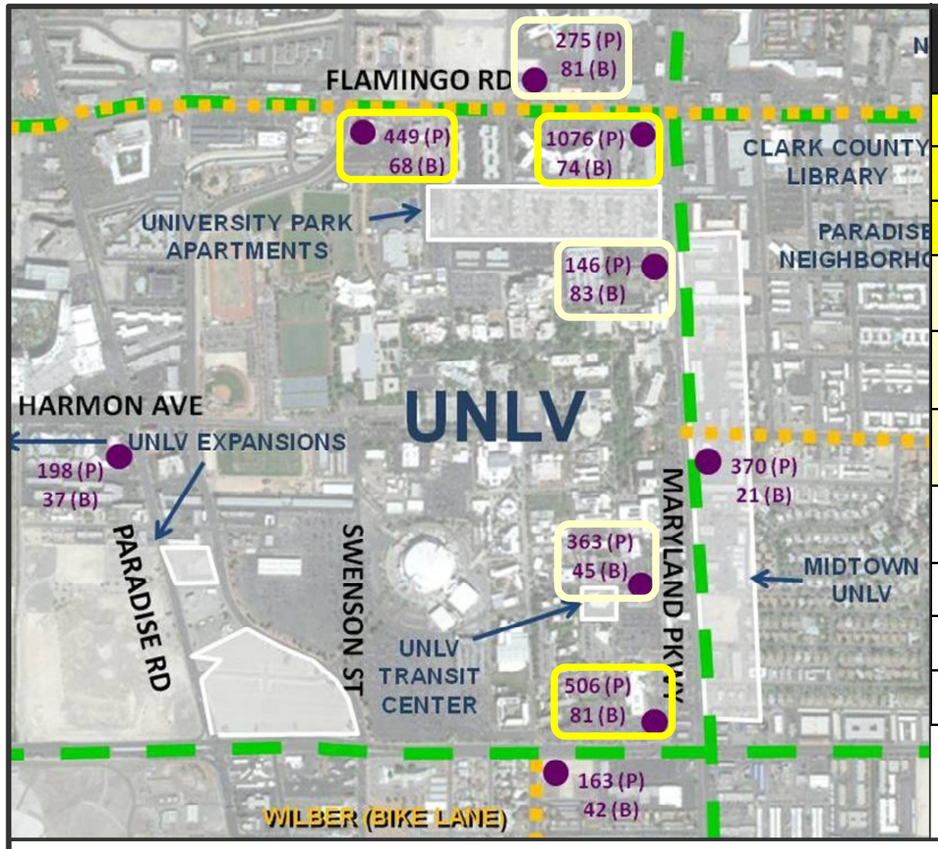
### Primary Destinations

The primary points of destination were determined through both the community outreach effort and through collaboration with UNLV stakeholders.

As highlighted in the previous section on community outreach, the survey results indicate the top six ranked locations. After further collaboration with stakeholders, two additional locations were added:

1. University Park Apartments
2. Dorm buildings at the south of campus

A campus map showing these locations is included in Figure 3-10: Primary Destinations.




| Location | Peds | Bicycles | Potential Total* | Rank |
|---|---|---|---|---|
| Maryland & Flamingo | 1076 | 74 | 182 | 1 |
| Maryland & Tropicana | 506 | 81 | 131 | 2 |
| Swenson & Flamingo | 449 | 68 | 113 | 3 |
| Cambridge & Flamingo | 275 | 81 | 109 | 4 |
| Cottage Grove & Maryland Parkway | 146 | 83 | 98 | 5 |
| University & Maryland Parkway | 363 | 45 | 81 | 6 |
| Harmon & Maryland Parkway | 370 | 21 | 58 | 7 |
| Wilbur & Tropicana | 163 | 42 | 58 | 7 |
| Harmon & Swenson | 198 | 37 | 57 | 8 |
| Driveway & Swenson | 21 | 4 | 6 | 9 |

**Assume 10% of pedestrians convert to using bicycles with implemented bike plan*

Figure 3-9: Summary of Bicycle and Pedestrian Counts around UNLV Campus

Figure 3-10: Primary Destinations on Campus

## Proposed Routes

### Types of Bike Routes

Designers should refer to the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities when designing specific bicycle facilities. Additionally, the National Association of City Transportation Officials' (NACTO) Urban Bikeway Design Guide is another nationally recognized resource for bikeway design standards that should be referenced. Both of these documents were used in the preparation of RTC's Regional Bicycle and Pedestrian Plan for Southern Nevada (RBPP). The RBPP identifies several bike facilities, a facility selection guide and design guidelines appropriate for Southern Nevada There are five general types of bike routes proposed for this plan. Examples of each are provided below.

#### *Roadway: Shared Lane Markings/Sharrows, Traffic Calming*

Figure 3-11: Shared Lane Marking (Sharrow)

This facility type is applied to low volume, low speed roadways where people on bikes ride with car traffic. A chevron and bike symbol is painted on the roadway to identify where bikes should ride and alert drivers that bike may be present. According to AASHTO standards, dimensions for Shared Lane Marking/Sharrow are 40 inches wide and 112 inches tall. Additional MUTCD bike route signage can enhance awareness for drivers. Refer to AASHTO and NACTO for more details on design criteria. Traffic calming elements such as speed bumps or curb extensions may be considered for this facility to slow traffic down.

### *Roadway with Bike Lanes*

Figure 3-12: Green Bike Lane

Bike lanes are appropriate for where traffic volumes and speeds may be higher. A designated space on the roadway for people on bikes is delineated from the car travel lane by painted lines and a bike symbol. The minimum standard bike lane is 5 feet wide. Green paint can enhance the visibility of the bike lane. Refer to AASHTO and NACTO for more details on design criteria.

### *Multimodal Path with Bike Enhancements*

This facility type is a shared off street path used by people on bikes, pedestrians, and in some cases also by maintenance vehicles. UNLV has several very wide paths for multiple modes. "Bike enhancements" for this type of facility implies these five general improvements:

1. At minimum, identifying the route as an official bike path on the UNLV Campus Bike Map
2. Ensuring appropriate bicycle network wayfinding is added to the route and the route connects to destinations with bike parking facilities.
3. As a near term solution to highlight the presence of people on bikes, shared lane markings may be placed on the inside edge of the pathway. AASHTO has guidelines for these markings and dimensions are cited earlier under the Roadway: Shared Lane Markings subsection. However UNLV may use their own design for these and should size the marking with respect to the path width.

   The inside edge is recommended because there will generally be greater pedestrian conflicts on the outside edge with people accessing buildings. The inside of the path effectively becomes "the fast lane" or "the passing lane" and the outside lane becomes the "off-ramp". Other faster modes such as skateboard and golf carts will be permitted in the inside lane as well.

Figure 3-13: Multimodal Path - Possible Near Term Enhancement

4. Mid or Long-term: Widening of certain paths where there is space and opportunity to do so.
5. As bicycle activity on campus increases, UNLV can invest in more dedicated space for people on bikes on multi-use pathways by painting a dedicated bike lane (one-way or two-way cycle track) on a portion of the path. Refer to AASHTO and NACTO for more details on design criteria. Additionally, a policy could be established giving priority to pedestrians and cyclists over vehicles such as maintenance fleet or golf carts.

Figure 3-14: Possible Ultimate Plan Multimodal Path Enhancement

### *Bike Path Only*

A bike path is dedicated to cyclists only and provides the highest level of comfort for riders. Per AASHTO standards, the preferred path width is 10' or more with 2' clear space on each side. Cyclists generally prefer an asphalt surface since concrete paths typically have joints that make the ride slightly disruptive. An example of a dedicated bike path is shown below.

Figure 3-15: Dedicated Bike Path

### *Dismount Path*

As bike routes approach high traffic pedestrian areas, it may be appropriate to designate a dismount area where people on bikes are required to dismount and walk their bikes through. This area can be delineated through pavement markings and signage. Dismount areas allow for critical connections for people on bikes while reducing potential conflicts in high-traffic pedestrian areas.

Figure 3-16: Bicycle Dismount Path

### *Wheeling Ramp*

A set of stairs has the potential to prevent cyclists from making some key connections. Such is the case with the staircase located at Artemus Ham Concert Hall. One solution to this challenge is to install a wheeling ramp. A wheeling ramp is a channel alongside a pedestrian staircase that facilitates walking a bicycle up or down the stairway. The channel should be sufficient to guide most types of bicycle tires without catching or causing damage. Additionally, the channel should be located with enough distance from the edge of the wall or railing to allow space for the handle bars of the bike when upright. There are several vendors that offer guidance on the best types, materials, methods for retrofitting and other tips for success.

Figure 3-17: Example of a Bicycle Wheeling Ramp

## Proposed Support Facilities

Support facilities proposed as part of this plan include:

- Bike Center
- Upgrading Bike Racks
- Major Bike Parking Areas
- Bike Share Stations
- Wayfinding/Signage

## Bike Center

Bike centers can range in the services provided and may include a central place for registration, repairs, accessories, classes, parking, showers, accessing transit connections and more. The RTC Bonneville Transit Center is an example of a location that includes many of these services. Most successful university bike programs include a bike center with these types of services. They can provide jobs for some university students, cooperative memberships for volunteers and also serve as a great meeting place for rides and other bicycle community events.

Figure 3-18: Bike Center at Bonneville Transit Center

## Bike Parking

### *Types of Bike Parking*

Bike parking options are generally categorized into short-term and long-term types. Short-term are typically bike racks, bike corrals or clusters of bike racks. These should be very easy to use and as close to the destination as possible. Long-term parking types include bike lockers, parking shelters, garage cages or fully enclosed facilities. Long-term parking users typically place a high value on bike parking with high security and weather protection. They are willing to travel further for facilities that offer this extra protection, however they should be centrally located to primary destinations. UNLV can contract with companies that offer turnkey services for installation, maintenance and management of these facilities. This could also include an online account for users providing membership, location and availability of parking and 24-hour assistance. UNLV may also consider the opportunity to have local artists or students involved in the design of custom bike racks or graphic design for bike locker or shelter surfaces. Figure 3-20 on the following page prepared by the Association of Pedestrian and Bicycle Professionals highlights some of the essentials of bike parking. Figure 3-21 to Figure 3-23 follows with some example photos of bike parking options being considered at UNLV and a general comparison of cost.

### *Upgrading Bike Racks*

The plan includes providing AASHTO-approved bike racks at all buildings on campus and supplementing some locations with additional bike racks based on demand. Any existing bike racks not meeting current AASHTO standards should be upgraded to approved types. The Association of Pedestrian and Bicycle Professionals (APBP) recommends that bike racks be placed no more than 50-feet from the building entrance, otherwise cyclists may lock their bikes to other infrastructure not intended for this purpose. For universities, it recommends one bike rack for every ten students of planned capacity.

### *Major Bike Parking Areas*

Major Bike Parking Areas could include a cluster of bike racks, bike lockers, parking garage cages or an enclosed facility. The locations were selected based on the following criteria.

CRITERIA:

- High ranked destination and primary traffic area
- Available space
- Outdoor only (no indoor or garage locations)
- Existing shading available
- Existing lighting
- Existing bike racks nearby
- Nearby parking garage
- Nearby transit stop

In addition to the above criteria, one of the primary concerns raised by UNLV is the value of parking spaces on campus. Any vehicle parking being replaced with bike parking needs to offset a significant loss of revenue. This justification will need to be considered during the design phase of the plan. Some studies show that bicycle parking generates more revenue than a parking spot due to the number of paying clients for the same amount of space. However, these studies were typically applicable to cities, not a university. Further evaluation would be required to determine the potential for bike parking to do this at UNLV.

*"Bicycle parking provides more revenue than an equivalent area of car parking and no wonder. You can fit 10 or more bicycles into a single on-street car parking space. This design is usually called a bike corral. A survey in Portland, Oregon, found that, despite initial skepticism, customer-oriented businesses absolutely adore bike corrals: They increase parking capacity by 400% to 800%, calm traffic, and draw eyes toward them and the businesses near them" –* www.bicycling.com

### Bike Service Station

Repair stations will vary in what they include, from a very basic tire pump and flat repair to a station that includes all tools necessary for basic repairs such as a tire lever, Philips screwdriver, flathead screwdriver, set of allen keys, set of wrenches and a heavy-duty air pump. Some even include QR codes posted on every stand to direct users to instructions on how to fix various kinds of bicycle-related problems. Because vandalism and theft of tools has been a concern, some manufacturers (design a lockbox feature to make the stations secure after business hours and overnight.

**Figure 3-19: Example Bike Service Station**

## SHORT-TERM PARKING

*Effective bike parking for short-term users depends on two main factors: 1) proximity to the destination and 2) ease of use.*

*Short-term parking is designed to meet the needs of people visiting businesses and institutions, and others with similar needs—typically lasting up to two hours. Short-term users may be infrequent visitors to a location, so the parking installation needs to be readily visible and self- explanatory.*

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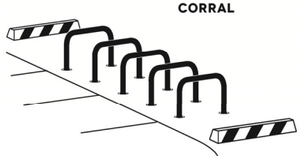
POST & RING



CORRAL

### SITE PLANNING

**Location**

Short-term bike parking should be visible from and close to the entrance it serves—50' or less is a good benchmark. Weather-protected parking makes bicycle transportation more viable for daily and year-round use, and it can reduce the motivation for users to bring wet bicycles into buildings. Area lighting is important for any location likely to see use outside of daylight hours.

**Security**

All racks must be sturdy and well-anchored, but location determines the security of short-term parking as much as any other factor. Users seek out parking that is visible to the public, and they particularly value racks that can be seen from within the destination. Areas with high incidence of bicycle theft may justify specific security features such as specialty racks, tamper-proof mounting techniques, or active surveillance.

**Quantity**

Many jurisdictions have ordinances governing bike parking quantity. APBP's full *Bicycle Parking Guidelines* offers complete recommendations for the amount and type of parking required in various contexts. In the absence of requirements, it's okay to start small—but bear in mind that perceived demand may be lower than the demand that develops once quality parking appears.

### BIKE CORRALS

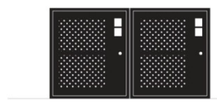
Some cities with limited sidewalk space and strong bicycle activity place bike parking in on-street "bike corrals" located in the street area adjacent to the curb. Bike corrals can sometimes make use of on-street areas that are unsuitable for auto parking. When replacing a single auto parking space, a corral can generally fit 8 to 12 bicycles. APBP's full *Bicycle Parking Guidelines* provides details about designing and siting bike corrals. **apbp.org**

**Figure 3-20: Essentials of Bike Parking, Source: APBP 2015**

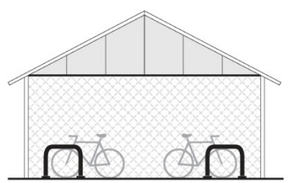
## LONG-TERM PARKING

*Users of long-term parking generally place high value on security and weather protection. Long-term parking is designed to meet the needs of employees, residents, public transit users, and others with similar needs. These users typically park either at home or at a routine destination such as a workplace. They often leave their bicycles unmonitored for a period of several hours or longer, so they require security and weather protection that let them park without unreasonable concern for loss or damage.*

*Long-term parking can take a variety of forms, including a room within a residential building or workplace, a secure enclosure within a parking garage, or a cluster of bike lockers at a transit center. Some long-term parking is open to the public—such as a staffed secure enclosure at a transit hub—and some of it is on private property with access limited to employees, residents, or other defined user groups.*



BIKE LOCKERS



SHELTERED SECURE ENCLOSURE

### SITE PLANNING

**Location**

Appropriate locations for long-term parking vary with context. Long-term parking users are typically willing to trade a degree of convenience for weather protection and increased security. Long-term installations emphasize physical security above public visibility. Signage may be needed for first-time users.

**Security**

Security is paramount for quality long-term parking. Access to parked bicycles can be limited individually (as with lockers) or in groups (as with locked bike rooms or other secure enclosures). Options for access control include user-supplied locks, keys, smart cards, and other technologies.

**Quantity**

Refer to local ordinances or the comprehensive APBP *Bicycle Parking Guidelines* to determine the amount and type of parking required for various contexts.

### SPECIAL CONSIDERATIONS FOR LONG-TERM PARKING

In many ways, short-term and long-term parking function similarly and are served by the same guidelines. Some exceptions are noted below.

**Density**

The competition of uses for high-security and sheltered locations creates particular pressure on long-term parking to fit more bicycles in less space. When parking needs cannot be met with standard racks and spacing recommended in this guide, consider rack systems designed to increase parking density. See the high-density racks table on page 7. Note that increasing density without careful attention to user needs can create parking that excludes people because of age, ability, or bicycle type. This may result in people parking bicycles in other less desirable places or choosing not to bike at all.

**Bicycle design variety**

Long-term parking facilities should anticipate the presence of a variety of bicycles and accessories, including—depending on context—recumbents, trailers, children's bikes, long-tails, and others. To accommodate trailers and long bikes, a portion of the racks should be on the ground and should have an additional 36" of in-line clearance.

**Performance criteria**

The bike rack criteria in the next section apply to racks used in any installation, regardless of its purpose. Long-term installations often use lockers and group enclosures not discussed in this guide. Such equipment raises additional considerations that are discussed in detail in APBP's full *Bicycle Parking Guidelines*. **apbp.org**

Figure 3-21: Examples of Short-Term Bike Parking: Bike Racks, Corrals or Clusters of Bike Racks

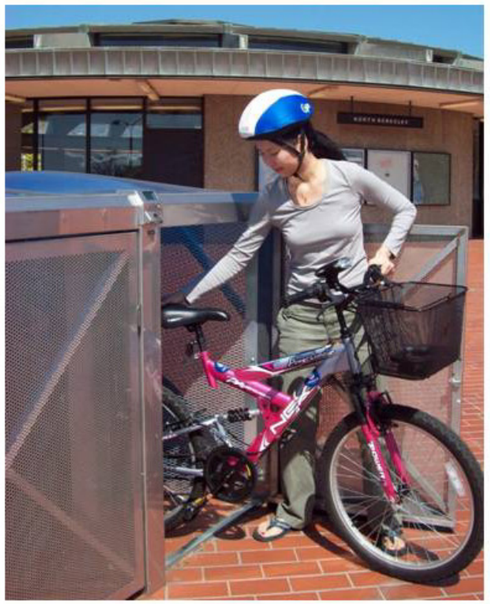
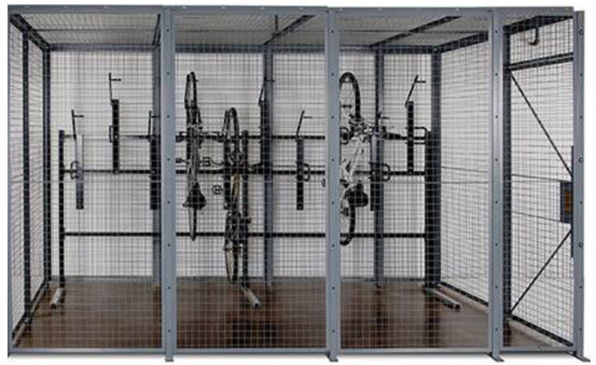


Figure 3-22: Examples of Long-Term Bike Parking: Bike Lockers and Aesthetic Opportunities



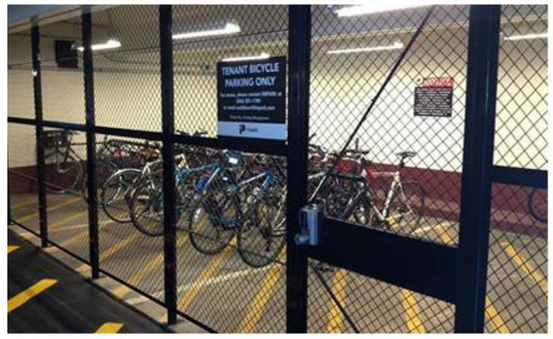


Figure 3-23: Examples of Long-Term Bike Parking: Bike Shelters, Garage Cages or Fully Enclosed Facilities

## Bike Share Stations

Bike sharing makes it economical and convenient to use bikes for trips that are too far to walk but too short to drive. The RTC just launched a new bike share program in Downtown Las Vegas this year. It includes 180 bikes and 21 stations and has been very successful to date. UNLV and RTC have discussed partnering to expand the bike share program to the UNLV campus. Therefore, this study includes some proposed bike share locations as part of the plan. This study recommends UNLV connect to the existing RTC bike share system rather than exploring other independent systems. This will allow for a seamless and effective regional system. Locations for bike share locations used similar criteria as the Major Bike Parking Areas.

Figure 3-24: Downtown Las Vegas Bike Share Station

## Wayfinding and Signage

Proposed wayfinding locations are identified in the plan. Locations of major destinations and bike parking areas should be clearly identified from designated bike routes. Time and distance for pedestrians and cyclists should be included on wayfinding signs. UNLV does not currently have a design or policy standard for wayfinding signage on campus, however an overall standard should be developed for the campus for all modes. This will help to maintain consistency of signage designs and eliminate redundancy or over-signing the campus routes.

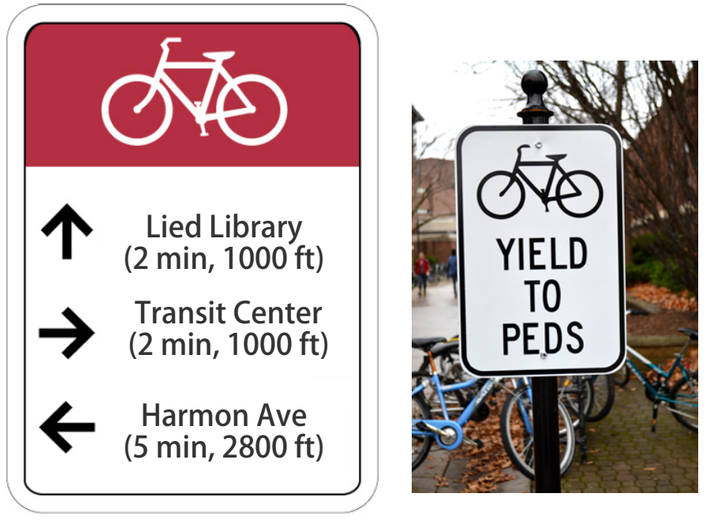



Figure 3-25: Sample Wayfinding and Regulatory Signage

## Combining all Components into the Campus Bike Plan

Figure 3-26 shows a map of UNLV with the all components of the long-term Campus Bike Plan. As discussed in the introduction, the approach for determining these elements involved:

1. Identifying existing conditions and facilities already being proposed by other projects on and adjacent to campus.
2. Conducting community outreach and survey to identify desire for improvements, types of improvements, and locations for improvements.
3. Reviewing bike plans implemented by other universities and highlight best practices.
4. Prioritizing entry points of campus and destinations on campus.
5. Identifying routes to create a network connecting those origins and destinations.
6. Identifying amenities to support the network.

Routes were selected based on their effectiveness to connect to priority destinations and the level of comfort for that route. More details on recommendations for each route are described in the tables following the plan. When the plan goes to implementation, designers should keep in mind that some intersections may require additional improvements. For example, advanced warning signs may be required for the bike facilities. Also an intersection reconfiguration at Wilbur Street and Tropicana Avenue will be required for a safe transition of cyclists into campus. It is also important to keep in mind the future expansion included in UNLV's

Campus Master Plan which was just updated this year (2016). The Bike Plan identifies an additional bike and pedestrian connection generally recommended by the Master Plan.

Major bike parking areas were selected based on the criteria described in the earlier section on this subject. Rather than have major bike parking at every key location, the consensus from UNLV was to place these in areas central accessible to several key locations and ensure the primary regions of the campus are effectively covered. Photos for the locations identified in the Plan are provided after discussion on route recommendations.

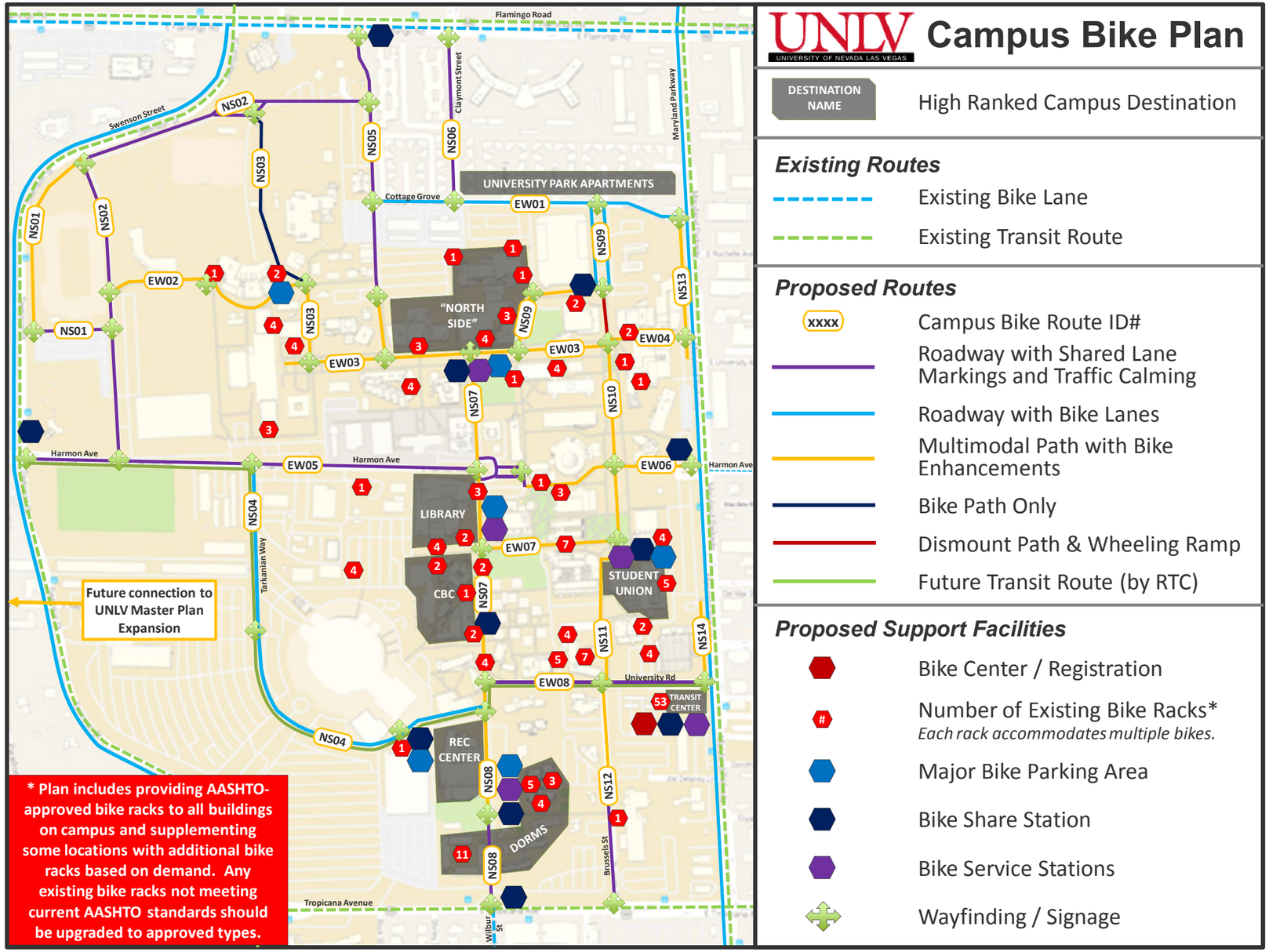



Figure 3-26: UNLV Campus Bike Plan (Long-Term Plan)

## Recommendations for Primary North – South Routes

**ROUTE ID#:** NS01

**LOCATION:** Dirt path running between Swenson St. and sports field, separate from any vehicle traffic.

**EXISTING CONDITIONS:**
Path is gated and not always accessible. Path grading is not ADA compliant, but could be considered as an alternate route.

**RECOMMENDATION:**
Convert portion of dirt path into dedicated paved bike path. Good signage required at south end to reconnect users through parking lot to roadway route NS02 and then Harmon Ave.

**ROUTE ID#:** NS02

**LOCATION:** Access road, running between Swenson St. and sport fields, from north of fields to Harmon Ave

**EXISTING CONDITIONS:**
Runs in east-west at north, then runs north-south. Access road separated from high traffic on Swenson St.

**RECOMMENDATION:**
Stripe roadway with shared lane markings Include additional traffic calming, such as speed bumps shown.

**ROUTE ID#:** NS03

**LOCATION:** Path runs just east of Lied Athletic Complex and McDermott PhysEd building, connects NS02 and EW03.

**EXISTING CONDITIONS:**
Runs north-south. Northern portion is an unpaved dirt road. Southern half is a narrow concrete path.

**RECOMMENDATION:**
Convert route into bike-only asphalt paved path with "Bike Only" signs. If a multi-use path is desired, consider widening and add shared lane markings to entire route.

**ROUTE ID#:** NS04

**LOCATION:** Tarkanian Way, around the Thomas & Mack, connecting Harmon Ave. to north of Rec Center

**EXISTING CONDITIONS:** Narrow two-way roadway from Harmon to Thomas & Mack, continues through parking lot. This is a major connection opportunity from main campus parking area into the core of campus.

**RECOMMENDATION:**
Stripe roadway and parking lot for bike lanes when route is also configured for future transit connection by RTC.

**ROUTE ID#:** NS05

**LOCATION:** Access road from Flamingo to route EW03

**EXISTING CONDITIONS:** Asphalt paved roadway cutting through surface parking lots. At south end, route converts to wide concrete path and connects to east-west grass-median paths.

**RECOMMENDATION:** Stripe roadway and parking lot with shared lane markings. Include additional traffic calming, such as speed bumps. Consider enhanced bike options for concrete path segment (sharrows, widening, dedicated lanes).

**ROUTE ID#:** NS06

**LOCATION:** Claymont Street, from Flamingo Rd. /Cambridge St. to Cottage Grove Ave.

**EXISTING CONDITIONS:**
Residential area, two-direction vehicle traffic, primary northern entrance to university.

**RECOMMENDATION:**
Stripe roadway and parking lot with shared lane markings. Include additional traffic calming, such as speed bumps.

**ROUTE ID#:** NS07

**LOCATION: N**orth/south concrete **"**Core Pathway" including Rec Center, Class Room Complex, and Library. Connects to NS08 at south end.

**EXISTING CONDITIONS:**
Very wide concrete path with access to primary destinations, lined with various landscaping, gets even wider in northern section.

**RECOMMENDATION:**
Consider enhanced bike options for concrete path segment (shared lane markings or dedicated lanes).

**ROUTE ID#:** NS08

**LOCATION:** Wilbur Street
From Tropicana Ave to Rec Center

**EXISTING CONDITIONS:**
Residential area and bike lanes south of Tropicana, signalized intersection.
North of Tropicana (within UNLV), roadway transitions to widened path, connects to primary destination points.

**RECOMMENDATION:**
Consider enhanced bike options for concrete path segment (sharrows or dedicated lanes). Stripe roadway with shared lane markings. Include additional traffic calming. Intersection at Tropicana, at the University entrance, may need to be reconfigured to accommodate cyclists.

**ROUTE ID#:** NS09

**LOCATION:** Shaded/landscaped couplet east of north parking garage, from Cottage Grove Ave. to plaza Artemus Ham Hall and Bayley Theater

**EXISTING CONDITIONS:**
Roadway separated by median with landscaping

**RECOMMENDATION:**
Stripe for bike lane, one way bike lane on each side of median. Continue connection to science/engineering buildings and EW03 path as shown on map.

**ROUTE ID#:** NS10

**LOCATION:** Two-sided north-south paths parallel to Maryland Parkway, from NS09/Flashlight/Artemus Ham Hall to Student Union.

**EXISTING CONDITIONS:**
Wide sidewalks on both sides of a wide grassy landscaped median.

**RECOMMENDATION:**
North segment includes bike dismount zone and stairway wheeling ramp to walk bike and connect to NS09/EW03. Consider enhanced bike options for concrete path segment: Dedicated bike lane or sharrows should be placed at inside of path closest to median, one on each side for each direction.

**ROUTE ID#:** NS11

**LOCATION:** Brussels St continued as UNLV path.
Becomes key access point to Student Union, Bookstore and outdoor event area

**EXISTING CONDITIONS:**
Wide sidewalks with additional room for possible expanded space

**RECOMMENDATION:**
Consider enhanced bike options for concrete path segment for each direction on outside edges of paths (sharrows or dedicated lanes). Evaluate expanding path for dedicated bike lanes.

**ROUTE ID#:** NS12

**LOCATION:** Brussels Street, University Rd to Tropicana Ave

**EXISTING CONDITIONS:** Primary south access point, connects to University Plaza. Northern segment is roadway for one-way traffic heading south, but includes more than 32 feet of a landscaped pedestrian facility on one side. Southern segment is a two-way roadway.

**RECOMMENDATION:**
Convert wide pedestrian facility along northern segment into a multi-use connection with pedestrian path, two-way dedicated bike path and landscaping. Stripe roadway at southern segment with shared lane markings. Include additional traffic calming, such as speed bumps.

**ROUTE ID#:** NS13

**LOCATION:** Pedestrian realm fronting Maryland Parkway, from Cottage Grove Ave to University Ave (north end).

**EXISTING CONDITIONS:**
Typical sidewalks with shrubs along curb, plus 3 widened paths and additional landscaping behind this.

**RECOMMENDATION:**
Consider enhanced bike options for concrete path segment (sharrows or dedicated lanes). Evaluate expanding path for dedicated bike lanes; Center corridor appears adequate for two-direction bicycle traffic.

**ROUTE ID#:** NS14

**LOCATION:** Pedestrian realm fronting Maryland Parkway, from south of Del Mar Ave to University Rd (south end).

**EXISTING CONDITIONS:**
Typical sidewalk along curb, plus wide sidewalks fronting campus buildings. Landscaping with shrubs and trees.

**RECOMMENDATION:**
Consider enhanced bike options for concrete path segment (sharrows or dedicated lanes). Evaluate striping path for dedicated bike lanes.

## Recommendations for Primary East – West Routes

**ROUTE ID#:** EW01

**LOCATION:** Cottage Grove
From Paradise Elementary to Maryland Parkway

**EXISTING CONDITIONS:**
Wide pavement with striped center turn lane.

**RECOMMENDATION:**
Evaluate traffic volumes, turning movements, opportunities for traffic calming. Stripe roadway for bike lanes.

**ROUTE ID#:** EW02

**LOCATION:** East-west route south of baseball stadium and athletic center connecting NS02 and NS03.

**EXISTING CONDITIONS:**
Well-shaded, wide concrete path, bordered by retaining walls so widening not possible.

**RECOMMENDATION:**
Add sharrows for a shared path.

**ROUTE ID#:** EW03

**LOCATION:** Two-sided east-west paths parallel to Cottage Grove Ave., from McDermott Physical Education Complex to Flashlight/Artemus Ham Hall.

**EXISTING CONDITIONS:**
Wide sidewalks on both sides of a wide grassy landscaped median.

**RECOMMENDATION:**
Consider enhanced bike options for concrete path (sharrows or dedicated lanes). Dedicated one-way bike lane using inside of path closest to median, one bike lane on each side of median.

**ROUTE ID#:** EW04

**LOCATION:** University Ave access, across Maryland Parkway, to/from Flashlight/Artemus Ham Hall

**EXISTING CONDITIONS:**
Primary northeast access point, wide concrete path, strong link between Maryland Parkway and two-sided east-west path (EW03).

**RECOMMENDATION:**
Consider enhanced bike options for concrete path (sharrows or dedicated lanes). Connection to two-sided east-west path (EW03)

**ROUTE ID#:** EW05

**LOCATION:** Harmon Ave
From Swenson St to Lied Library

**EXISTING CONDITIONS:**
Primary west-side vehicle entrance. Currently not bicycle friendly due to traffic volumes and speeds. Sidewalks with landscaping.. Continues through parking lot on east end and connects to EW06.

**RECOMMENDATION:** Evaluate traffic volumes, turning, and opportunities for traffic calming. Add sharrows on roadway and in parking lot. Enhanced dedicated bike facility would require conversion of space/redesign. Consider roundabout at library with sharrows for cyclists.

**ROUTE ID#:** EW06

**LOCATION:** Harmon Ave, from Maryland Parkway to primary north/south corridor with grass median. Continues west using existing concrete path south of Boyd Law School.

**EXISTING CONDITIONS:** Residential and commercial area along east side of campus. Bike lanes exist on Harmon St., east of Maryland Parkway. Intersection at Maryland Parkway features a signalized intersection and is a primary entrance to campus. Existing pedestrian path.

**RECOMMENDATION:** As part of UNLV's reconfiguration of Harmon entrance, evaluate connection from Maryland Parkway and parking area to the pedestrian access shown here. Widen sidewalk to a minimum of 10 feet, or expand for separate bike path (converting landscaping). Consider enhanced bike options for concrete path segment south of Boyd Law School (sharrows or dedicated lanes).

**ROUTE ID#:** EW07

**LOCATION:** East-west pathway connecting Library/CBC to north entrance of Student Union.

**EXISTING CONDITIONS:**
Wide concrete path. Important east-west link to north-south routes and high traffic destinations. North side includes existing bike racks.

**RECOMMENDATION:**
Consider enhanced bike options for concrete path (sharrows or dedicated lanes).

**ROUTE ID#:** EW08

**LOCATION:**
University Rd from Maryland Parkway to parking endpoint, with connection to core north/south path (NS07, NS11).

**EXISTING CONDITIONS:**
Sidewalks, wide pavement with low traffic.
Access to Transit Center.

**RECOMMENDATION:**
Add sharrows, traffic calming.
Need to consider route is also planned for future transit connection by RTC (via NS04).

## Locations for Recommended Support Facilities

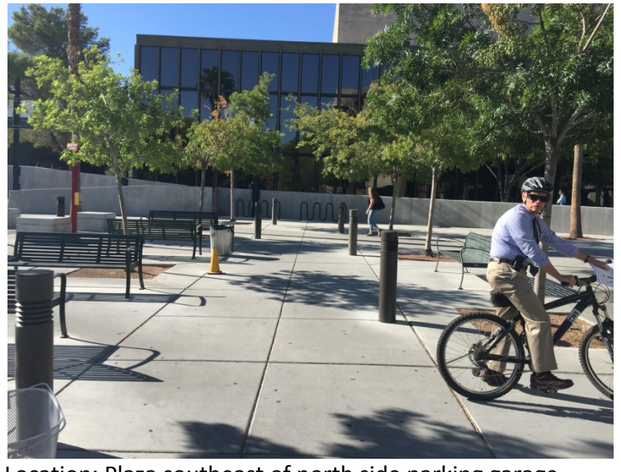
Location: UNLV access road west of Claymont St., across street from Flamingo Rd. transit stop
Facilities: Bike Share Station

Location: North of Harmon Ave., near Swenson St. transit shelter
Facilities: Bike Share Station

Location: North of Harmon Ave., on UNLV side, between two Maryland Parkway transit stops
Facilities: Bike Share Station

Location: Northeast of Tropicana Ave. and Wilbur St., between two Tropicana Ave. transit stops
Facilities: Bike Share Station

Location: Southeast corner of Lied Athletic Center
Facilities: Major Bike Parking Area



Location: Plaza southeast of north side parking garage
Facilities: Bike Share Station

Location: Plaza south of engineering buildings
Facilities: Bike Share Station, Major Bike Parking Area, Bike Service Station

Location: Between dorms and Rec Center
Facilities: Bike Share Station, Major Bike Parking Area, Bike Service Station

Location: Transit Center
Facilities: Bike Share Station, Bike Service Station and Bike Center / Registration (long-term)

Location: Southeast of Library entrance
Facilities: Major Bike Parking Area, Bike Service Station

Location: Future RTC transit route, at transit shelter behind Rec Center
Facilities: Bike Share Station

Location: Southeast of Classroom Building Complex (CBC) entrance
Facilities: Bike Share Station

Location: North side of Student Union entrance, on Pida Plaza side, under portico, u-racks installed parallel to windows
Facilities: *Bike Share Station, Major Bike Park Area and Service Station.

Location: South side of Student Union entrance, on Moyer Amphitheater side, u-racks installed parallel to windows
Facilities: *Bike Share Station, Major Bike Park Area and Service Station.

*Notes: If there is insufficient sunlight to solar power the bike share station, AC power may be required.

Bike rack installation is flexible and these can be moved to new locations if space is needed in the future for other purposes.

## 3.3 Implementation

### Next Steps

A summary of this Plan's recommendations and cost considerations is included in Appendix 3C. The next steps for implementation of the project include:

1. Develop a Campus Bicycle Advisory Committee
2. Identify Funding
3. Design and Construction Phasing
4. Program Evaluation
5. Program Refinement and Expansion

### Develop a Campus Bicycle Advisory Committee

Creating a Campus Bicycle Advisory Committee will be essential to the success of the bike plan implementation. This type of organized leadership was a common element in the most successful university bike programs.

*"The Campus Bike Advisory Committee is a working committee that meets monthly, staffs bicycle advocacy events and promotes bicycle education and safety on the CSU Campus. Their mission is to promote a safe and enjoyable bicycle experience through awareness, planning and education. They encourage the environmental benefits of bicycles as affordable green-transportation for our campus community. Additionally the Bike Advisory Committee manages an on-campus listserv to keep interested community members informed about on-campus bicycling efforts."*

- Colorado State University Bike Plan

The committee should consist of individuals with various roles and expertise, for example, those familiar with the local cycling community, registration, student life and government, funding applications, methods for implementing policy change, UNLV Parking and Transportation Services Department and UNLV Planning and Construction. The Committee should submit an application to the League of American Bicyclists for UNLV to become a Bicycle Friendly University (BFU). Even if UNLV is not awarded a BFU status level after the first application, going through the process is a highly recommended approach for understanding the components necessary to support a strong culture of biking on campus.

The case studies described earlier in this study provide some great examples of the types of elements the Committee can integrate into the campus bike program. One recent example right at UNLV includes an email distributed to all staff and students educating recipients on bike safety and preventing theft. The campus bike map, annual bike event calendar, and the campus bike policy (as it develops) should be included as part of new student registration. Appendix 3D of this report includes links to notable university bike plans with many more ideas and details for promoting a bike culture on campus that should be considered.

## Identify Funding

The University will need to identify funding for the recommendations of this UNLV Campus Bike Plan, any related bicycle programs, and possibly support staff. Although specific funding for the Plan has not yet been identified, UNLV has stated its commitment to obtain the funding to implement the plan. Below is a list of potential funding sources along with the type of bicycle projects and programs that are applicable.

### Local Sources

- University Grants/Funding
- Student Government
- Student projects (e.g. Landscape Architecture program, or other programs)
- Complete components of bike plan as part of other campus improvement projects, such as new buildings or the re-configuration of the Harmon Avenue entrance.
- Sponsorships from local vendors or businesses with opportunities for marketing on or around bike facilities.

### Federal Funding Sources

- Congestion Mitigation and Air Quality Improvement Program (CMAQ) - funds may be used for either the construction of bicycle facilities or non-construction projects related to safe bicycle use. Constructions projects in the public right of way are eligible for CMAQ funds
- Transportation Alternatives Program (TAP) - program authorized under the federal transportation bill (Fixing America's Surface Transportation Act or "FAST Act") provides funding for transportation alternatives including bicycle facilities. UNLV would enter a competitive process for project selection for TAP funding alongside local jurisdictions.

## Design and Construction Phasing

It is recommended that UNLV set goals to achieve the long-term plan within ten years. This ten-year plan should include a short-term goal of about 3 years. Figure 3-27 shows the recommended 3-year goal for a Near Term Implementation Program. UNLV may select some or all components of the Near Term Plan to begin as a pilot program. Each phase will need to complete full design including details on the configuration of bike parking, route improvements and any supporting facilities. Detailed costs and specifications should be included.

UNLV should also develop a comprehensive Campus Wayfinding Standards and Policy (to include bike system signage). The wayfinding standards should accommodate all campus mode types and could include elements such as exterior sign type descriptions, interior sign type descriptions, a phasing plan, cost estimates, a maintenance plan and contact information. Below are some items to consider for developing a highly effective wayfinding system:

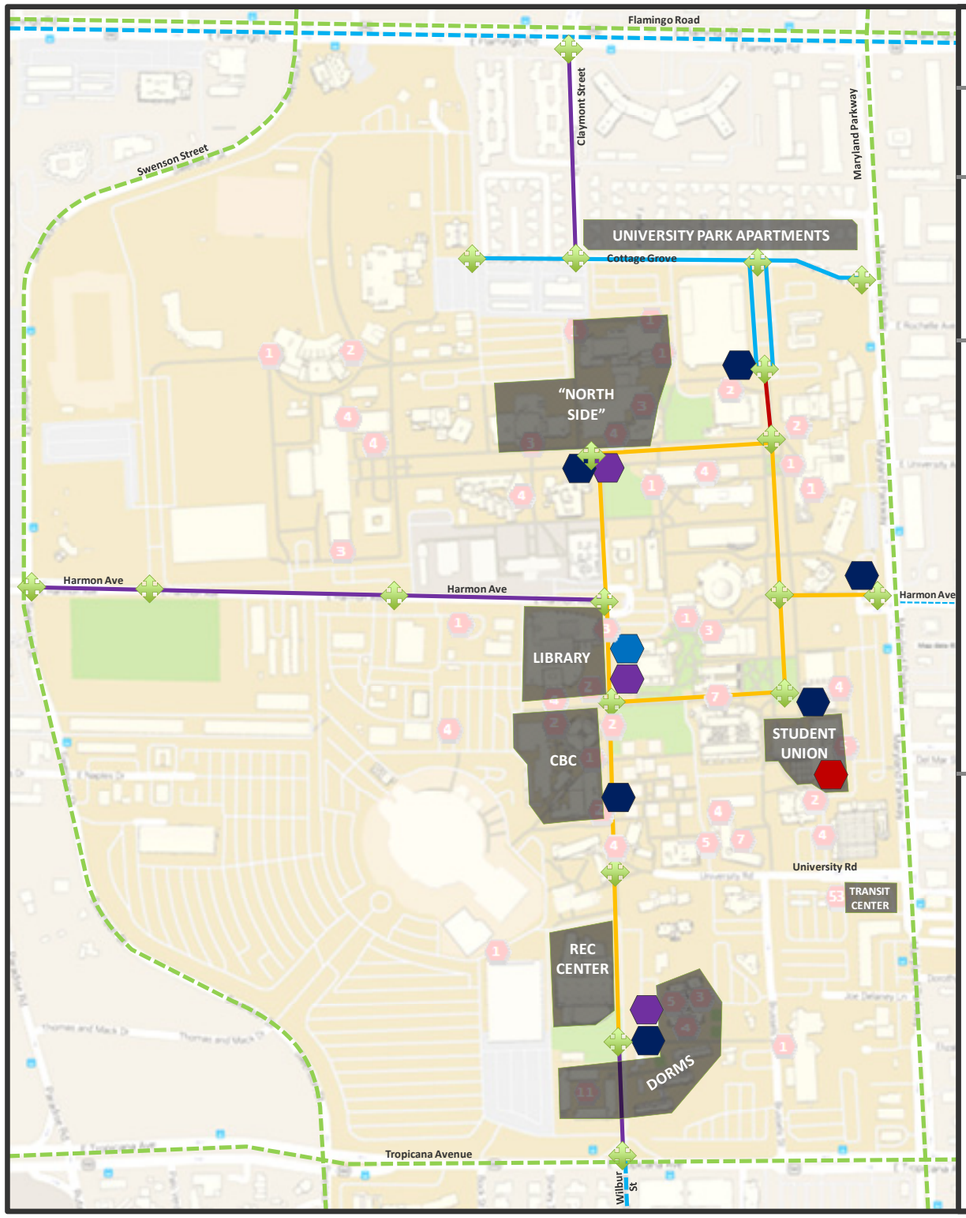
- Ensure participation from campus users
- Design for the first-time visitor
- Strategic structuring of information to keep individuals moving toward their destination
- Control circulation
- Thoughtfully and consistently define destinations
- Test the system

## Program Evaluation and Refinement

As with most new programs, it is important to have performance measures in place in order to evaluate their effectiveness. The Campus Bicycle Advisory Committee should establish and have an evaluation system in place even before implementing the Pilot Program. This way “before and after” lessons can be learned and refinements can be made to any program improvements already implemented and to improvements planned for the next phase of the program. Some examples of these performance measure methods include:

- Annual bike count program
- Satisfaction surveys
- Measuring impacts on parking congestion
- Measuring impact to bike theft (reviewing related police reports)

The Appendix 3D of this report includes links for notable university bike plans with more ideas and details for evaluating university bike programs that should be considered.




## UNLV NEAR TERM PROGRAM

UNIVERSITY OF NEVADA LAS VEGAS

DESTINATION NAME — High Ranked Campus Destination

### *Existing Routes*

- Existing Bike Lane
- Existing Transit Route

### *Proposed Routes*

- XXXX — Campus Bike Route ID#
- Roadway with Shared Lane Markings and Traffic Calming
- Roadway with Bike Lanes
- Multimodal Path with Bike Enhancements
- Bike Path Only
- Dismount Path & Wheeling Ramp
- Future Transit Route (by RTC)

### *Proposed Support Facilities*

- Bike Center / Registration
- # — Number of Existing Bike Racks*
  *Each rack accommodates multiple bikes.*
- Major Bike Parking Area
- Bike Share Station
- Bike Service Stations
- Wayfinding / Signage

Figure 3-27: UNLV Campus Bike Plan (Near Term Implementation Program)

SPENCER GREENWAY TRAIL
& UNLV CAMPUS BIKE PLAN

# APPENDICES

SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

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SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

# Appendices - General

## 1A SAC Meetings Summaries and Comments

| SAC Meeting #1 | | |
|---|---|---|
| 03.01.16 | 2:00 p.m. | RTC of SNV– Conference Room 296 |
| **Meeting called** | RTC | |
| **Facilitator** | J.P. Woyton | |
| **Note taker** | Ron Maurizi, reviewed by J.P. Woyton | |
| **Attendees** | Cathy Halka – RTC<br>J.P. Woyton –Parsons<br>Ron Maurizi –Parsons<br>Raymond Hess – RTC/Southern NV Strong<br>Tad McDowell – UNLV – Parking and Transportation Services<br>David Frommer –UNLV – Planning and Construction<br>Fred Solis – City of Las Vegas – Planning<br>Connie Diso – City of Las Vegas – Public Works<br>Scott Hagen – Clark County – Comprehensive Planning<br>Kathleen Kingston – Clark County – Public Works<br>Chelsie Campbell – NV Energy<br>Sherie Moore – Clark County School District<br>Ron Floth – Southern Nevada Bicycle Coalition (SNVBC)<br>Andrew Trelease – Regional Flood Control District<br>Deb Reardon – National Park Service | |
| Meeting Summary | | |

Presentation

Attendees introduced themselves and identified their favorite trip and/or trail.

Cathy gave the stakeholders some background on the study. Cathy talked about the important role of the Stakeholder Advisory Committee (SAC). The project team will rely on the SAC to help guide the plan.

JP described the team organization chart. JP discussed the scope, schedule, public engagement approach, and deliverables. He promoted interaction between the stakeholders during this presentation. JP noted that NV Energy, utilities and flood control are all challenges to consider in this study.

Discussion

JP asked attendees to provide details on their priorities for this project.

- Deb Reardon highlighted the importance of including local residents- they were not involved in Phase 1. She suggested online outreach in Spanish and outreach at Blvd Mall, Charleston Plaza and area neighborhoods. She also suggested targeted outreach to homeowners adjacent to the trail.

- Tad noted that UNLV is very interested in bike share facilities on campus.

- Coordination with the planned downtown bike share system should be considered.

- It was suggested that the end points of study (UNLV and Charleston Boulevard) be coordinated with connectivity beyond those points.

- Request to share the ppt – Cathy said she would email it to the group.

- Will the survey be online? JP said yes.
    - Will the online portion be in Spanish? JP said we can do that.

- We need to consider key locations and organizations to reach out to.
    - The team will share this with the SAC for comment.

- Destinations are important and must be relevant. Target key destinations in the survey questions. Ask how they would use the trail.

- David suggested outreach to Shadow Lane campus could be helpful – people often travel between Shadow Lane and the main campus.

- Scott mentioned a potential connection at the southern end of Spencer to campus. Difficult segments to provide connection to UNLV. He thinks the most viable connection will be on street. There is no cheap way to get through the flood control channel. LV National golf course is also a block to the east. Should be in the plan, but hard to hang our hat on a good cheap way through to the university. They are always up against ROW.

- Scott is interested in what the residents along the route will say. Scott is looking for something that is developed collaboratively by multiple jurisdictions, boards, etc. SNPLMA and BLM grants look at collaboration as a factor.

- Scott said CC installed flash cams in some areas (Flamingo Royal) in the County to assist with safety issues, but concerned about the success of flash cams – will provide additional feedback from CC on experiences with flash cams.

- Sherie said the number one barrier to walking is crime in the area. Drive by shootings have taken place here. Sherie asked how we will overcome the safety issues in the corridor. Residents will say this is an issue and it is. Population is 80% or higher Spanish speaking in the schools.

- Fred suggests tying downtown improvements into Spencer Greenway. They want to see alternatives that are doable considering NV Energy issues. Bruce Street has a design improvement in process and is a way to connect. Charleston is another design underway.

- JP would like to get plans from consultants doing these bike facilities at some point. Review the downtown master plan. The Maryland/Charleston hub should be a consideration.

- Connie said signage was important to connectivity/destinations.

- Chelsie said to make sure we can all work as a team to come up with creative solutions.

- David noted that UNLV has a plan in development and is excited about this project being included in the plan. The student population refreshes itself every few years. He suggests also including faculty and staff in the plan. They feel these designs will enhance connectivity on the campus. JP mentioned the University Park apartments and the Mid-town plan, which all impact this study. University Park will bring a 750-bed increase on campus. There is a University Gateway project which includes a parking structure to the east of Maryland Parkway. This provides a great opportunity for students without cars.

- Andrew believes underground Charleston drainage probably won't affect project but other construction might affect construction of trail. A drainage system under St. Louis might be considered. To the south there is an existing Desert Inn system and the Flamingo Wash. But overall doesn't look to bad from his perspective.

- Raymond believes feels the crossings will be a challenge. Sahara, DI, difficult to cross. This project has a core study area boundary...important to show connections to other areas, but those might require additional studies from the RTC's perspective.

<u>Branding</u>

JP went to the board and discussed developing branding for the project. He asked "What does the group think of when they think of this corridor study?" Many ideas were added to the board (see image below) including the following:

- UNLV Rebels, Spine, Efficient, Midtown, Neighborhood, Community Owned, Commuter, Freemont, Life is Beautiful, First Friday, Downtown Student Living, Medical District Shadow Lane, Connection, Link, Students, Smart, Innovative, Neon, Zappos, Pioneer, Clean Energy, Green, Culture, Riding Rebels, Container Park, Historical, Arts District, School to Cool Trail, Nightlife, Study, Research, Diversity, Spanish, Intellectual Capital, Natural vs. Urban, Energy

(relates the positive connection), Repurpose, Welcome, Downtown Gateway, Recreational Facility, Car Free, Off Traffic, Safe

- Deb Reardon said it would be good to have artists on board. JP said we have Bunny Fish on board to assist in this perspective. Bunny Fish staff are both UNLV graduates.

Mapping Activity

An aerial map was provided to the attendees and on the board. Attendees were asked to identify key origins/destinations and potential routes connecting to UNLV.

- Sherrie mentioned that CCSD has bike counts all over the place that the study team can utilize.
- Major destination and land use areas were discussed as being the Boulevard Mall, Sunrise Hospital, schools (including Peterson ES on Twain),
    - UNLV destinations include the Transit Center, Library, Classroom Complex, Rec Center, Student Union – these are areas most used by bikes
        - Not a lot of bike traffic at sports complex or at the Thomas & Mack (people usually walk)
- Fred said there was a convenient link to the trail from Boulevard transit stop.
- Sherie said Valley High School has a big attendance boundary.
- Scott said that between trail and UNLV consider using Twain as an option.
- Scott said Ruby Thomas Elementary School and Dean Peterson PDS Elementary School share the same attendance boundary even though they are on different sides of Maryland Parkway. Look at attendance boundaries of schools to understand travel patterns.
- Deb Reardon indicated we need support from the property owners, including schools.

Transit

- Centennial bus route terminates outside of campus. A route along Harmon into campus would be helpful.
- Tad said the UNLV transit center bike facilities are minimally used so no bike thefts there right now.
- JP said the UNLV transit center was important to the overall route.

- Tad said students would use bike center if it was secure to store your bike. The library could also use this.

- Fred said the issue is there is no academic building near the bike transit center. The recreation center and student union are major destination areas and the most utilized areas on campus. Dorms and apartments would use those areas for storage sites (they are generators) but not a destination. Travel nodes are storage, class stops, lunch stops. David doesn't think sports areas are bike destinations. Tad believes student and visitor areas are your generators.

- JP stated that Parsons was looking at getting students and zip codes to generate a map of where they are coming from. Tad has an older list. Dave will send JP what he has with zip code data.

Opportunities and Challenges

- Sherie said a potential trailhead at Crestwood School would be a contentious issue if you take away their parking area on the trailhead.

- Connie believes a trailhead at Charleston would be better location. Having a place to park the car and take trail to downtown (for Life is Beautiful perhaps) or to UNLV, or just to use the trail for exercise would make this a good trailhead location.

- Deb Reardon said that there is more than one location where joint use of trail occurs for parking or other uses. There is one near Griffith Methodist Church as well

- JP noted that getting safely across Sahara was an important consideration with the trail.

- The shared parking area along Karen belongs to a private owner.

- There are grading issues at Desert Inn and at Spencer at driveways. Could be a challenge to meet ADA treatment.

- South of Desert Inn is a potential green area or parkway.

- Looking further south at alternatives to reaching UNLV, there are possible connections with Twain, Katie, Flamingo Wash and trailhead at the southern end.

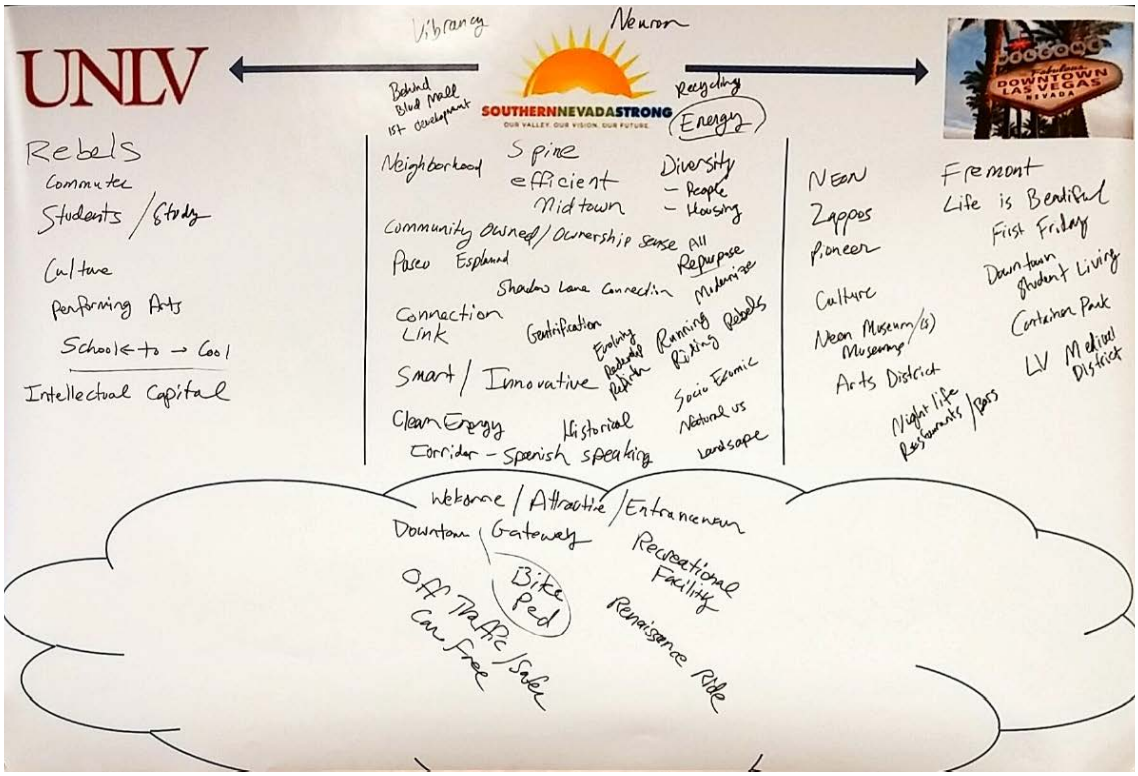
- Connie said, if a trail detour is taken at DI and Pawnee to Nahatan Way, good signage will be needed.

Next Steps

- Cathy noted that the next stakeholder meeting would be in April 2016.
    - Sherrie suggested CCSD Real Property attend the next meeting.

The meeting adjourned.

Branding Brainstorming Exercise:



# SAC Meeting #2

| | | |
|---|---|---|
| **04.11.16** | **2:00 p.m.** | RTC of SNV– Conference Room 108 |

| | |
|---|---|
| **Meeting called** | RTC |
| **Facilitator** | J.P. Woyton |
| **Note taker** | Ron Maurizi, reviewed by J.P. Woyton |
| **Attendees** | Cathy Halka – RTC<br>J.P. Woyton –Parsons<br>Ron Maurizi –Parsons<br>Tad McDowell – UNLV – Parking and Transportation Services<br>David Frommer –UNLV – Planning and Construction<br>Fred Solis – City of Las Vegas – Planning<br>Connie Diso – City of Las Vegas – Public Works<br>Scott Hagen – Clark County – Comprehensive Planning<br>Kathleen Kingston – Clark County – Public Works<br>Chelsie Campbell – NV Energy<br>Sherie Moore – Clark County School District<br>Ron Floth – Southern Nevada Bicycle Coalition (SNVBC)<br>Mauricia Baca – Outside Las Vegas<br>Tracy Murphy – CCSD<br>Tamara Williams – CC<br>Peter Kisfalvi – LVMPD<br>Sandy Seda – UNLV PD<br>Robert Mayor – CCSD Police<br>Andrea Limpede – Studio Bunnyfish<br>Alauddin Khan – Transpomatics/UNLV<br>Rae Lathrop – RTC<br>Irma Covard – CC Real Property Management |

Meeting Summary

**Meeting minutes are considered final and agreed upon if no comments are received after one week of distribution**

Introductions

Cathy provided an introduction to the group. Each attendee introduced themselves to the group.

Project Status Update

JP discussed the coordination and outreach, provided a schedule showing the current level or progress and provided upcoming meetings. He also provided an outreach overview to the group.

Upcoming Outreach

This Saturday as part of the outreach a booth will be set-up at the Multicultural Festival at UNLV. This event has drawn over 7000 attendees in the past. JP expects good exposure for the surveys.

UNLV TRC described the work they have outlined regarding the UNLV outreach.

Dave Frommer suggested outreach to the faculty senate, the student government (CSUN), the graduate and professional student association and the classified staff council.

Campus police suggested campus residence halls as points of outreach since there are usually a lot of bicycles around those locations.

Ron discussed the CCSD interviews Parsons had with Lake and Crestwood elementary schools. He said parking areas were at capacity at both schools. He said both principals said they were weary of losing any parking. Student safety and homeless people on the school property were also concerns. Sherie with CCSD said all the schools are over capacity with students (325 over capacity at Crestwood and 400 over capacity at Lake). She will talk with Principal McHargue at Lake E.S. regarding a more "wholistic approach" to school security since he was concerned with safety, the proposed trail and keeping it separate from the school as much as possible.

Ron discussed possible public outreach locations. Boulevard Mall was most desirable due to its location and attraction to most people in the neighborhood. The group also agreed. Other outreach possibilities were mentioned as follows:

Sherie mentioned the following schools have social media pages – Crestwood Elementary, Ruby Thomas, Orr, Freemont MS (Crestwood ES students feed into Freemont MS).

Rae mentioned the following neighborhoods have social media pages – South Ridge, Jonas Park, and Beverly Green. She also mentioned Christ Episcopal Church at Maryland Parkway and St. Louis. She mentioned the Lewis Street Corridor is well organized.

Tad and David mentioned that it would be best to do the UNLV public meeting prior to May 15th since school will be basically at the end of finals. May 7th or earlier would be best.

Peter with LVMPD mentioned a Metro Safety Fair at Boulevard Mall on May 14th from 11 to 3 as a possible outreach location. Also, Downtown Area Command has an event every first Tuesday of the month at 7th and Bonanza.

Other locations mentioned by the group include – Clark County Library on Flamingo at Maryland Parkway, Griffith Methodist was sold off and no longer is a church to consider, the Winchester Community Center. Ron Floth mentioned the Jaycee Park which has great numbers of people playing soccer on weekends. Rae mentioned Baker Park on St. Louis also has lots of soccer on weekends.

JP discussed the survey questions and general public meeting material. The survey will be launched this Saturday, the 15th at the Festival of Communities at UNLV.

Cathy asked for feedback via email from the community on the survey.

JP went through the survey questions. Suggestions were provided along the way:

Scott discussed adding bikes on busses to the survey. This prompted Cathy to inquire on data we already have on this type of ridership.

Scott stated there is not a lot of parking on this trail. Parking is expensive. It was recommended we do not build an expectation of parking with the trail. Most users will be walking from the neighborhood and not driving anyway.

Sherie hopes there are trailhead areas along the path.

JP asked Bunnyfish to discuss the charette. Andrea said community was important. Generating visuals/sketches with the community and turning those into logos. She would ask "What are the opportunities and strengths of the area?"

Robert had a comment on public art. If kids have ownership they are less likely to damage things. Having the neighborhood kids paint panels along the trail gives them ownership. Tamara said there was similar mural work near commissioner Giuliani's office.

Robert said painting murals with eyes seems to lessen vandalism.

<u>Design Elements and Standards</u>

Ron went through the case studies of similar trails in the community and also discussed general trail design standards to consider on Spencer Greenway. Lone Mountain had some issues with safety. No property owner can see the trail.

Rae said no road signs were provided to identify street crossings. For this reason it is hard to determine where one is at every street crossing. Connie said that a sign project was established for the Lone Mountain trail to address this.

Dave asked if the purpose of the trail was to have ADA accessibility. Ron said yes it will be ADA accessible.

Crime and Safety

The discussion shifted to crime and safety on the trail because it was important to incorporate that into the meeting and time was running low.

Sandy said at UNLV crime is up during the first few weeks of school mostly bicycles. They made several arrests in that area. Then a period of no thefts comes and a spike up again. The police work with the pawn shops to recover bicycles.

Sandy was concerned with bicycle storage. Finding places for it that are close to cameras would be most effective. Sandy said maps of camera locations are available from the campus and that there are opportunities to add cameras if needed.

Peter said there were increases in robberies at Bonanza and Washington for trail users. Lighting made a difference. Lighting needs to be present with no dark spots. Residents were far back in these areas. Neighbors need to have visibility of the trail to help deter robberies. Don't allow a place for bad guys to hide. College students need to learn how to protect themselves and their property when they get to campus.

Signage indicating video surveillance is effective along with multi-directional lighting.

Robert said problems could be precluded by providing low vegetation and promoting good visibility through the trail area. Victims are targeted when they are not paying attention to what is around them. The community should be educated to protect themselves. Good lighting is paramount.

It was mentioned that the UPRR trail had motion activated lighting which proved effective. In addition, speed calming before intersections on the trail is effective in slowing down bicycles by utilizing tactile strips.

Sherie said multidirectional, high quality lighting (LED) is very important. Markers should be provided every quarter mile to help locate people in emergencies.

Peter noted call boxes are very good crime deterrents and helpful in emergencies of both crime and health.

Robert said cameras need good lighting to work properly in the evening.

Peter mentioned one neighborhood where they were using motion activated flash cameras. This provided sharp shots at the moment and are less costly than 24 hour surveillance. Tracking cars coming in and out of trailheads would be done very well this way.

Scott said not to limit hours on the operation of the trail. It is worse safety-wise when hours are limited.

Connie noted that some neighbors along the beltway trail did not like the lighting from the trail shining into their backyards so it was not provided due to their requests. Sherie said shielded lighting is an option in that case.

Mauricia noted that multi-bulb lights are less prone to vandalism and maintain operability almost all the time.

Robert said if the trail is used a lot then crime will go down naturally. If it is used infrequently crime will go up.

Pedestrian and Bicycle Counts

Ron discussed bike count locations at UNLV. Tad suggested adding a count station at Harmon and Swenson as well. Sherie asked if the locations were established by observation or otherwise. Ron said these locations were based on most common access points and the presence of existing bicycle lanes outside of campus. Also, some were based on observation. For example, the campus housing units typically have more bicycles parked around them for residents to get around. Those are near Wilbur and Tropicana where Ron established a count station.

Tad asked if Parsons could send the "heat map" of student distribution. Ron will send this to him after the meeting.

Utility Restrictions

Ron discussed utility restrictions with NVE. Meetings will be arranged with NVE during the study as well.

Next Steps

Cathy discussed the next steps with the study. She said discussed the finalization of outreach materials for both UNLV and the corridor residents. RTC will be hosting public meetings and asked the stakeholders to help get the word out. Pedestrian and bike counts will be taken over the next few weeks. Preliminary alternatives will be further developed. The next public meeting will be at UNLV and another will follow at one of the locations discussed earlier today shortly after the UNLV based meeting.

The next Stakeholders Advisory Committee meeting will be scheduled during July 2016.

# SAC Meeting #3

| 07.14.16 | 1:30 p.m. | |
|---|---|---|
| **Meeting called** | Spencer Greenway | |
| **Facilitator** | Cathy Halka | |
| **Note taker** | Noah Mataele, reviewed by J.P. Woyton | |
| **Attendees** | RTC:<br>Cathy Halka<br>Rae Lathrop<br><br>RFCD:<br>Andrew Trelease<br><br>NVE:<br>Chelsie Campbell<br><br>CLV:<br>Connie Diso<br>Lorenzo Mastino<br><br>UNLV:<br>David Frommer<br>Tad McDowell<br><br>CC:<br>Scott Hagen<br>Tamara Williams<br>Richard Rolanson<br><br>CCSD:<br>Sherie Moore<br><br>Studio Bunnyfish:<br>Travis Allen<br><br>PARSONS:<br>J.P. Woyton<br>Ron Maurizi<br>Noah Mataele | |

Meeting Summary (next page)

**Meeting minutes are considered final and agreed upon if no comments are received after one week of distribution**

Meeting Notes

1. This meeting was scheduled as a Stakeholder Advisory Committee meeting, with the purpose of discussing elements of the Spencer Greenway Transportation Trail and UNLV Campus Bike Plan. The meeting was also a great opportunity to gather feedback and suggestions to improve the overall concept.
2. Travis presented the different concepts of art that could be implemented on the trail.
    a. Chelsie Campbell (NVE) – Artwork in the substation is limited to painting transformer boxes and walls. NV Energy does not want individuals, kids in particular, to think they can enter the area.
3. Ron reviewed the trailhead concepts created by our landscape architects. He then went through the entire trail and its alternatives. The following is a list of comments/recommendations discussed:
    a. Trail would be concrete for durability since it is a NV Energy maintenance way as well. Concrete is cooler but rougher to ride a bike on because of expansion joints. Ron responded that special saw cut expansion joints could be used to smooth out the ride.
    b. NV Energy cannot guarantee to stay only on the 10 ft concrete bike trail, therefore the 5 ft pedestrian trail must also be concrete or the trail could be damaged from the NV Energy outriggers.
    c. Trail will be multi-use, designed for both pedestrians and cyclists. Neither will take preference over the other.
    d. Scott said five (5) feet is not adequate for pedestrians, even if single file. Trails need to be at least 6 ft. Clearance is important on both sides so that people are not shouldering into other trail users.
    e. One concern was whether the pedestrian and bike path would be separated. But in the county's experience, a shared use path has never been a problem.
    f. Sherrie noted the Nahattan/Pawnee intersection is awkward and users will not go around the corner to cross the street. It is out of direction. Roundabout was suggested. Suggestion to keep pedestrian on south side of Nahatan as well.
    g. David noted Harmon is an attractive and underutilized entrance to campus.
    h. Andrew remarked that the Flamingo Wash from Maryland to Cambridge is very difficult to access right now. Improvements to that area are a very high priority.
    i. Harmon via Spencer is a very attractive, underutilized opportunity to access campus.
    j. Rae noted that new trail users will not be familiar enough with where the trail stops abruptly. It could potentially be very dangerous if users gain speed without the knowledge that a side walk is ending. It was suggested that the trail not begin at Charleston, but start at Wells Fargo instead. The use of stop signs was also suggested.

k. Crossing at Spencer/Twain needs to be reviewed for safety because of sightlines. Appropriate signage is also necessary. Consider moving to the west on Twain.
l. Paradise Palms has become eligible for Historic Preservation status. Murals and artwork are to be kept in mind.
m. The park at Orr Middle School should be coordinated with the trail. There should not be a fence in between.
n. 90° turns not good for bikes. Double check approaches to intersections. Stop signs may be needed.
o. NDOT has plans for Charleston from Hillside to Burnham including bulb-outs for traffic calming.
p. Need additional parking for Ruby Thomas at Pawnee/Nahattan. A trailhead is identified there, but parking can be included in this design.
q. Twain is a good route for improvements because it is also a school route.

4. After reviewing the UNLV Campus Bike Plan, JP asked for any feedback. The following was recommended:
    a. The question was asked whether UNLV dorms come up as a popular location on campus.
    b. Coordinate with Dave and Tad and discuss with student organizations to avoid conflicts with future bike lockers and popular gathering places.
    c. Bike parking located closest to entrances/doors are recommended because they are near congregation areas, which is the type of traffic desired.
    d. Bike parking located in places with a lot of pedestrian traffic will discourage theft.
    e. Dave suggested bike parking nodes for multiple buildings use versus bike security parking at each building. Might not be aesthetically pleasing to have bike storage at each building's front entrance.
    f. Dave suggested another more targeted discussion on this in the near future.
    g. In Tadd's experience, most bike users are users who live on campus.
    h. At Arizona State University a successful strategy was implemented where a lot of small lockers were placed around campus, and a few large lockers were placed in certain central locations.
    i. A closer look will be taken for wireless bike lockers.
    j. Look at combining RTC bus pass with bike locker system so one can get a discount if you are riding transit and locking up a bike.

**PSPR PROJECT NO. 16-045**

## Spencer Greenway Transportation Trail and UNLV Campus Bike Plan

### *Stakeholder Advisory Committee Meeting #4*

# SAC Meeting #4

| 10.24.16 | 2pm to 4pm | |
|---|---|---|
| **Attendees** | RTC:<br>Cathy Halka<br>Rae Lathrop<br><br>RFCD:<br>Andrew Trelease<br><br>NVE:<br>Chelsie Campbell<br><br>CLV:<br>Connie Diso<br>Lorenzo Mastino<br><br>UNLV:<br>David Frommer<br>Tad McDowell<br><br>CC:<br>Scott Hagen<br>Tamara Williams<br>Richard Rolanson<br><br>CCSD:<br>Sherie Moore<br><br>PARSONS:<br>J.P. Woyton<br>Ron Maurizi<br>Noah Mataele<br>Studio Bunnyfish:<br>Travis Allen | |
| Meeting Summary (next page) | | |

**Meeting minutes are considered final and agreed upon if no comments are received after one week of distribution**

Meeting Notes

1. Cathy commented she is hoping to hear if the group has any changes today in anticipation of the future public meetings. She wants to make sure what we provide is supported by the SAC. Past comments have been incorporated in today's presentation. Another homework request to be provided today, asking for responses by 11/7/16.

2. JP stated that today's meeting will be broken out into Spencer Trail and then UNLV Study. An agenda is provided.

Spencer Trail

1. Overall status – everything on track according to the proposed schedule.
    a. SAC meeting is today, to show how comments have been addressed.
    b. Outreach to occur during the week with UNLV students.
    c. Public meetings scheduled for November 1st and 3rd.
    d. Draft document ready by December.
2. JP presented logos, branding and themes. These will be determined in the next phase.
3. JP presented art opportunity types.
    a. Coloring along transformers removed per NVE.
    b. Activities, community and crossings (art to slow down traffic).
    c. Maintenance was an issue. Who will own it?
    d. Art at trailheads.
4. Question raised on asphalt or concrete? NVE OK with both but they are not responsible for repair. Concrete has expansion joints.
5. Trailheads were very frequent before and now are redefined to major trailheads and trail access points.
    a. One south at Orr MS and one north at Wells Fargo.
    b. Lower priority options at Cherokee, Griffith and Crestwood.
6. The group discussed the NVE slide. $60M to bring everything underground which would be cost-prohibitive. JP suggested moving interior poles to the outside with NVE coordination. Report covers more about details here including clearance, grounding, etc.
7. The group discussed the Trail Visualization
    a. JP showed the plan view of existing condition as DI road. Demonstrated view improved with landscaping, low water use plants, etc. Block wall here was asked to remain by neighborhood. It is viewed as a historic feature in the neighborhood.
    b. JP showed the perspective photo rendering. The wall is maintained. Colored pavement may be used to match branding colors. Elegant bronze theme. Calling

out trail access points here with palm trees, arches, something to call out the trail. Shading was a top comment for the trail. Shade structures can be designed to allow line of sight through them. This location is not a trailhead but considered a trail access point. Someone suggested we don't show a camera in the exhibit. Orr MS being redesigned over the next couple years.

8. JP reviewed alternatives to connect UNLV to Spencer Greenway. Routes on Twain ruled out. Flamingo Wash would be great but needs improvement. Flamingo was added for review but would not be a high comfort connection for most users. Spencer to Harmon was the preferred route, the best near term access route. It provides access at the highest profile entrance of UNLV at Harmon/Maryland Parkway. .
9. JP reviewed the DI Road crossing options. The preferred connection will be able to maintain the 15' path and has less safety concerns with sight distance. Additional 5' of public ROW may be available.
10. Funding options and ownership was discussed by the group.
11. Wells Fargo owns property at site was questioned. When Cathy met with WF, they stated they were open to partnering and branding plus providing additional parking and a nice trail access point.
12. Sherie provided CPTED session to us. Ideas for safety and security provided by landscaping. JP plans on including a section of the report specific to this. Sherie said crime rates on trails are very low. Her suggestions will help address concerns of the public.
13. The group discussed Next Steps.
    a. Community meetings at Boulevard Mall and UNLV. Meetings will have trail maps, renderings before and after, art opportunity slides, UNLV maps and the pilot program.
    b. The team will distribute flyers to businesses along the corridor again as we did in the first run of public outreach. Survey reached nearly 1000 respondents.

<u>UNLV Campus Plan</u>

1. Overall status described by JP, schedule similar to SG trail
2. Summary of university bike plan successes:
    a. Recommended facilities.
        i. Types of bike racks (two points of contact), routes (dedicated are best practice) and support facilities (bike share and security from theft)
    b. Implementation
        i. Apply to become a bicycle friendly university.
        ii. Bike culture leadership program. Opportunity exists at the university to raise the awareness and education of the bike community on campus.

iii. Stanford Bicycle Program Seven "E's" - Environment, Education, Engineering, Evaluation, Encouragement, Engagement, Enforcement.
iv. Suggested that the team look at reaching out adjacent businesses.

c. Proposed Route Types
   i. JP discussed proposed route types. Bike lanes along some of the routes. Multimodal path with bike enhancements. Dedicated bike path. Dismount path and stairway ramp (which would be great at the flashlight location on campus).
   ii. Connections provided to high traffic destination points on campus.
   iii. Ron says there needs to be education on how to lock up your bike properly, secure your seats. He has a class he teaches that he can do for others.
   iv. Secure bike parking identified. Will expand on this with report. David said destination shouldn't be a garage. The destination should be the school points not the garage (to park).
   v. University will need to establish Wayfinding/Signage types.

d. Pilot Program
   i. Sometimes UNLV parks up to 20 buses (school type) during the day on the north end at dual roads according to Tad. Something to consider.
   ii. David suggested a bike share near the parking garage
   iii. Talk to registrar about adding bike registration to student registration process.
   iv. The group discussed converting pedestrian traffic to bike traffic.

e. Open Discussion
   i. Please let Cathy know of any map changes over the next 2 days.
   ii. Provide response of homework in the next few days.
   iii. The team will talk to campus community government about this bike plan

**PSPR PROJECT NO. 16-045**

## Spencer Greenway Transportation Trail and UNLV Campus Bike Plan

### *Stakeholder Advisory Committee Meeting #5*

# SAC Meeting #5

| 12.15.16 | 10am to 12pm | |
|---|---|---|
| **Attendees** | RTC:<br>Cathy Halka<br>Rae Lathrop<br>Ron Floth<br><br>CLV:<br>Connie Diso<br>Lorenzo Mastino<br>Mike Howe<br><br>UNLV:<br>David Frommer<br>Tad McDowell<br>Robert Dincecco<br><br>CC:<br>Scott Hagen<br>Kathy Kingston<br><br>CCSD:<br>Sherie Moore<br><br>OLVF:<br>Mauricia Baca<br><br>PARSONS:<br>J.P. Woyton<br>Ron Maurizi<br>Studio Bunnyfish:<br>Travis Allen | |
| Meeting Summary (next page) | | |

**Meeting minutes are considered final and agreed upon if no comments are received after one week of distribution**

Meeting Notes

1. Cathy led the group through introductions and a summary.
2. This is a plan that local jurisdictions can take forward to the next step. Stakeholders received the report yesterday. The group will be going through report today. She encouraged Stakeholders to share with others in their departments.
3. JP discussed the agenda summary for the meeting today.
    a. Project status and schedule
    b. Outreach Summary – Blvd Mall and UNLV outreach dates, efforts included post-card mailings and student to student outreach at UNLV.

**Spencer Trail**

1. A brief summary of SAC and public comments was provided
2. **NV Energy**
    a. Three meetings with NVE prior the latest meeting. The team has kept them updated with progress and latest concepts. Consolidation of poles is the most practical alternative. Undergrounding poles would be cost-prohibitive.
    b. RTC made an official request to NVE for a preliminary cost estimate (Rule 9). NVE needs a separate engineering study to do this (2 months). The area is very old. The project may need to fund an engineering study to learn the cost of a consolidation of poles.
    c. NV Energy is looking into options for trail ownership. They are not sure if they would provide easements or sell the land. Liability is a primary issue as land owner, but if ownership is transferred the liability is reduced.
3. **Art Opportunity Types**
    a. CEPTED presentation by Sherrie helped with this section of study. Methods of providing art that deters crime – eyes, movement, etc.
    b. NVE does not want colors on their transformers, but educational kiosks are fine. Art directly on poles will not be allowed, however it can be done on a protective wrap, such as a wooden octagonal frame. UNLV - Will their idea of education supportive of learning about energy and what it does in the valley? Cathy says yes they are receptive of this.
    c. Connie likes the circle dots in parkway example.
    d. David F said the educational/promotional aspect of energy infrastructure is important to show and could be of value. There is a lot of infrastructure out there and people don't know what it's for and how it's used.
4. **Final Draft Recommendations**
    a. Connie - St. Louis crosswalk – move to intersection instead of mid-block
    b. Ron suggests a bike lane on Spencer between Sahara and Oakey
    c. Desert Inn/Pawnee - enhanced trail on east side of Nahatan Way suggested. Continue trail as a wide sidewalk on the east side. Recommendations for

crossing at DI, traffic control device here is an important consideration. Landscaping/fence at Nahatan to discourage access from trail users.

d. NV Energy at Sahara. NVE open to educational opportunity site at substation. Connie suggested a cycletrack on Spencer along substation. Cathy says there is enough room within ROW to stripe. Connections added from side streets to trail.
e. Crestwood Elementary. Added possible connection from trail to playground. Coordinate with CCSD on bus stop and crossings on Wengert. Sherrie says they should consolidate driveways from two to one. Art opportunity community mural suggested.
f. Future action item beyond this scope - evaluate some type of connection from end of trail to Bruce Street project. Parking at north end would mean trail is relocated outside of it.

5. **Funding and Ownership**
    a. CC mentioned SNPLMA or partnership in federal grants, agency funding for crossings, sponsorship opportunities, NV Energy Foundation. NVE is open to having parts of the trail funded by this. Connie mentions FHWA recreational trails grant. Cathy says TAP funding would be good for this project as well.
    b. NV is evaluating agreement options to either own the land or sell the land and have easements to agencies. NVE in a supportive role.
    c. Cathy talked about privatization of trails. Having a non-profit raise money to support ongoing maintenance.
    d. This could be a "legacy project", because it has the potential to be a high profile project with a partnership between CLV and CCPW. Some funding sources, such as SNPLMA, may increase their max and provide additional funding for this reason.
    e. Potential for coordination with potential business sponsors for segments of the trail (e.g. Wells Fargo, Hertz, Honda, and others…even those not near the trail).
6. **Page Turn of Report**
    a. Material question on paths. JP says we are recommending asphalt. NVE is ok with asphalt, but will not be liable for any maintenance issues. Cathy mentioned that maintenance is due to NVE truck is minimal since they are not accessing the area very often. Asphalt is smoother, less expensive, better surface for users.
    b. CC asked how we would handle upfront costs to consolidate poles. SNPLMA cannot pay for this work. NVE cannot pay for this work either. Each jurisdiction will have to look at this individually. NVE is still open to the project without the poles being moved. The trail is conceptually designed around the existing poles, keeping this option open. UNLV suggests sections supported by donors. Cathy says Wells Fargo has interest in sustainable development and possibly sponsoring a trailhead at Charleston for example.

**UNLV Bike Plan**

1. A brief summary of SAC and public comments was provided
2. JP discussed 5 general improvements to multimodal paths:
    a. ID route as an official bike path on campus (minimum)
    b. Wayfinding and connection to destinations with bike parking (minimum)
    c. Shared lane markings - NEAR TERM
    d. Widening of certain paths - MID or LONG Term
    e. Dedicated bike lanes ultimately - As bicycle activity increases on campus. JP also pointed out there are some universities that do not have dedicated lanes but still achieved platinum status.
3. As bike culture develops it will change the layout and configuration of campus configuration.
4. Sherrie suggested - Add time of travel to signs
5. Campus Bike Plan presented – East West and North South routes
6. Stairway ramp suggested at flashlight locations.
7. RTC asks about golf carts and using bike share instead on campus to reduce congestion. Each department maintains carts on campus. Purchasing would have to approve bike share memberships. Ron mentions electric bikes are forthcoming as well. Three wheelers can be used with trailers instead of a golf cart.
8. UNLV noted one section of Brussells is one way from Joe Delaney to University Road. Consider this in study.
9. The Tarkanian Way route provides an option to get people from parking to core of campus on their bikes. UNLV will have to widen transit route before buses operate. Could be a good time to install bike lanes the entire section around T&M.
10. Cathy suggests a bike parking area is needed at Thomas and Mack. UNLV says it is very congested there. Best to put parking farther away and let people walk. JP recommended adding bike parking at the location where bike share is being recommended (at the unused transit stop behind the Rec Center). UNLV liked this idea.
11. Student Union - Bike share station at SU under stair will need access to AC power since it's too shaded for solar power to work. Student union bike parking may shift out if there is any future reconfiguration of the building or plaza spaces. Racks are easy to move later if necessary. UNLV staff like the u-racks parallel to window walls.
12. **Program Evaluation and Phasing**
    a. Bike committee on campus was formed but was placed on hold while the plan was being completed.
    b. Performance Measures – Annual count, satisfaction surveys, measuring impacts on parking congestion and bike theft. UNLV tracks thefts through police reports.
    c. Phasing – Near Term (3 years) and Long Term (10 Year)
13. **Funding**

a. Local Sources – University grants, student projects, part of campus improvement projects, sponsorships.
b. Fed funding sources – congestion mitigation and air quality improvement program (pubic ROW only), transportation alternatives Program (TAP), Federal Transit Administration grants.

14. Bike share – considerations for vendor procurement:
    a. Should be same vendor as used with RTC and connected with their system.
    b. UNLV may face challenges with this due to procurement requirements for a competitive bid. Suggestion that RTC identify the vendor.
    c. RTC would manage contract for operations and maintenance on an expanded system on UNLV campus. UNLV will have to provide space for stations.
    d. CMAQ also funds bike equipment
15. **Final Draft**
    a. The group did a report page turn together.
    b. Several participants from the outreach events said they were interested in bike lockers on campus. UNLV Tad says Bonneville type center is preferred due to being enclosed. Cathy, Ron Floth and JP discussed Bike Link and how it has been an effective and successful option. JP says #1 concern with outreach was bike security and these can provide a secure option at an intermediate cost. Cathy said these would not completely replace bike racks but supplement them.
16. **Next Steps**
    a. Any additional comments by the 21st.
    b. Releasing report in January.
    c. Presentations with UNLV folks, town advisory boards, Winchester, Board of County Commissioners, presentation to RTC and ultimately go forward to RTC for acceptance in February.
    d. This is last meeting. Future communication via email and website.

# SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

STAKEHOLDER ADVISORY COMMITTEE MEETING #3
**COMMENT TRACKING**

**August 2016**

***FINAL DISPOSITION LEGEND:*** ***A-Accept Comment, B-Will Evaluate, C-Clarify Comment, D-Delete Comment, NA – Noted, no action required***

**1. <u>Take a look at the trail concept map.</u>**

Are these the right <u>trailhead locations</u>? Any other trailhead locations you would add?

| No. | | Referred Document | REVIEWER COMMENT | AGENCY/ REVIEWER | CONSULTANT RESPONSE / ACTION ITEMS | FINAL DISPOSITION |
|---|---|---|---|---|---|---|
| 1 | | All | I see 12 potential trailhead sites shown on the concepts. Seems like we would only construct 1 to 3 trailheads. Suggest prioritizing which ones to build based on pedestrian and bicycle counts. Suggest eliminating the one by the NV Energy substation. I wouldn't want to use a trailhead near a substation. Also would it be safer for children or less safe from a crime standpoint to have a trailhead by the Orr Middle school? | CCPW Design, Kathy Kingston | Numerous locations are currently shown because some trailheads are meant to be major and some are meant to be minor (or merely crossing entrance points).<br>A trailhead is already identified at Orr MS, but this should be more clear and expanded upon.<br>The trailhead identified near the NVE substation north of Sahara crossing was identified more as a possible NVE educational opportunity than a typical trailhead. There is open space available here for this.<br>1. Better define which trailheads are major and minor. Better define what amenities may be typically included for each of these types. Discuss using a term such as “enhanced trail crossing entrance” instead of minor trailhead.<br>2. Select 1-3 major trailheads.<br>3. Evaluate following trailhead locations:<br>a. North of Sahara NVE substation (for removal) – discuss with NVE if educational opportunity would even be permitted here. Otherwise remove location from north and evaluate “enhanced trail crossing entrance” at south end.<br>b. Near Desert Inn Rd (for removal)<br>c. Orr Middle School (for inclusion) – expand upon opportunity and safety considerations here. | A |
| 2 | | All | Overall too many locations. These can be vetted down through the group process and public feedback.<br>Key questions include what do we want the trailheads to be and how do we want them to function (informational, recreational, place to park cars, place to access trail, place to put art, etc. etc.) Need to define purpose/use of the trailheads.<br>Suggest no trailhead page 4 of 12 near NV substation and no trailhead page 8 of 12 near Desert Inn Road. | CCPW Parks & Rec, Scott Hagen | | A |
| 3 | | Comments transferred below | Trailhead comments for the Charleston, Oakey, Sahara, Vegas Valley Dr., Cherokee Lane and Katie Ave. locations: see pdf with comments for details. | CLV Planning – Long Range | Responses/action items described below | See below |
| 4 | | Sheet 1 | The Wells Fargo Trailhead should be a prominent trail terminus that provides water, shade, and bicycle station opportunties (corral, DIY fixit, air pumps, etc). With the future improvements to Charleston and Bruce, this spot could become a substantial bike/ped hub. | CLV:<br>PDF Trail concept Sheets:<br>(mphowe) | 1. Include this input in report write-up and trailhead concept drawings as applicable | A |
| 5 | | Sheet 1 | The Wells Fargo Trailhead:<br>Good having extension of parking lot, but try to keep the trail curve as soft as possible (not like in current alternative connection). | CLV:<br>PDF Trail concept Sheets:<br>(lmastino) | 1. Evaluate opportunity to soften curve, or identify alternative with softer curve. | A |

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|---|---|---|---|---|---|---|
| 6 | | Sheet 1 | The Charleston, St. Louis and Sahara locations are ideal whereas the Bracken location may not be used as much due to it being a less traveled street. Residents will tend to stay on the streets they're use to traveling.<br>Also, high visibility at the ideal locations listed above will serve to hinder vandalism. | CLV:<br>Connie Diso, Rick Schroder, Jonathan Groppenbacher | 1. Identify Bracken location as being only an "enhanced trail crossing entrance", not a major trailhead.<br>2. Note importance of visibility for prevention of vandalism in report.<br>3. Evaluate adding activated crosswalk to Oakey and identify this location as an "enhanced trail crossing entrance". | A |
| 7 | | Sheet 2 | Can we orient the trailhead to the southside of Oakey, rather than at Bracken? Also, a lit or activated crosswalk here maybe? | CLV:<br>PDF Trail concept Sheets:<br>(mphowe) | | B |
| 8 | | Sheet 4 | Would it make more sense to put the trailhead on the south side of Sahara, rather than next to the substation? | CLV:<br>PDF Trail concept Sheets:<br>(mphowe) | See response to comment 1 above. | A |
| 9 | | Sheet 6 | It seems a little trailhead heavy over here. Can we get by with one trailhead for Vegas Valley? | CLV:<br>PDF Trail concept Sheets:<br>(mphowe) | Change locations to "enhanced trail crossing entrance" instead of trailhead. | B |
| 10 | | Sheet 10 | Maybe a trailhead is not necessary here. Or it could be trailhead-lite (just a simple kiosk with map) | CLV:<br>PDF Trail concept Sheets:<br>(mphowe) | There is a trail head opportunity here that could also coincide with drop off/pick up needs for the Ruby Thomas ES. Otherwise – agree, trailhead may not be justifiable here. | B |
| 11 | | Sheet 11 | We think there is an opportunity to improve the connection with Orr MS and possibly put a MOU in place to utilize/expand the CCSD/CC park here.<br>Trailhead here maybe? | CLV:<br>PDF Trail concept Sheets:<br>(mphowe) | See response to comment 1 above | A |
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Are there specific <u>amenities</u> (e.g. benches, maps, etc.) needed at any particular trailhead?

| No. | | Referred Document | REVIEWER COMMENT | REVIEWER | CONSULTANT RESPONSE | FINAL DISPOSITION |
|---|---|---|---|---|---|---|
| 12 | | All | Shade is always nice; however shade could potentially attract vagrants. Would suggest any shade features to be at locations by businesses and not by schools or homes. | CCPW | Good suggestion, agree.<br>1. Include input in report guidelines for trail design. | A |
| 13 | | All | NVE needs a minimum vertical separation from powerlines, which could eliminate some of the shade structure alternatives shown. | CCPW | Agree. Team is coordinating with NVE and including their requirements in the report.<br>1. Include input in report guidelines for trail design. | A |
| 14 | | Sheet 5 | I wouldn't want to use a fitness feature located too closely to a road, and there is one that is located between two roads, Karen and Del Mar. I would eliminate that one due to proximity to vehicles and exhaust from cars. Then again, perhaps having a fitness feature close to the roads would be safer from a crime standpoint than having one that is more isolated. | CCPW | Agree with both points, but traffic volumes and speeds are generally low here.<br>1. Include input in report guidelines. If an "Activity" center is considered here, need to also consider passing vehicles in the design and options to mitigate any issues related to these, such as safety, car exhaust and | A |

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|---|---|---|---|---|---|---|
| | | | | | visibility. | |
| 15 | | All | How are we lighting the trail and who would pay for the ongoing power bills for that light? | CCPW | Construction and maintenance costs would be paid for by agencies that are the trail owners or through agreements. Sponsorship opportunities could be explored as well. Consultant will provide planning level information for decision-making, but will not determine trail owners.<br>1. Refine lighting and amenity options.<br>2. Provide planning-level cost estimates<br>3. Outline prioritization to support decision-making. | B |
| 16 | | All | Who would own and maintain the trailheads, trails and associated amenities? | CCPW | | B |
| 17 | | All | This will depend on defining and refining the purposes/uses of the trailheads.<br>Any amenities and associated elements can be fun but can be real targets for vandalism. Also need to weigh use vs. cost vs. maintenance of some proposed elements. | CCPW Parks & Rec, Scott Hagen | | B |
| 18 | | All | All trailheads should have shade, benches, kiosk/map, trash bin, water, and a unifying art or design component. Bike racks should be placed at north and south trailheads as well as in the central location (St. Louis Ave.) | CLV Planning – Long Range | Agree.<br>1. Include input in report write-up and concept drawings. | A |
| 19 | | All | All trailheads near street crossings should have maps to orient users to nearby areas of interest as well as the trail alignment itself. | CLV: Connie Diso, Rick Schroder, Jonathan Groppenbacher | | B |
| | | | | | | |
| | | | | | | |

Any suggestions for the trail alignment and street crossings recommended (e.g. crosswalks, traffic controlled with ped refuge island)?

| No. | | Referred Document | REVIEWER COMMENT | REVIEWER | CONSULTANT RESPONSE | FINAL DISPOSITION |
|---|---|---|---|---|---|---|
| 20 | | Sheets 9 and 10 | Suggest refreshing existing crosswalks, like the one at Cherokee. Possibly add sidewalk ramps to provide access to the trail from the east and west sides of Spencer between Twain and Seneca/Nahatan. | CCPW | Agree.<br>1. Include input in report write-up and concept drawings.<br>2. Include recommendation for development of connecting sidewalks, ramps, refreshing of crosswalks and new crosswalks where applicable in report. | A |
| 21 | | All (CLV - north of Sahara, CCPW-south of Sahara) | Is any work being proposed on existing sidewalks? | CCPW | | A |
| 22 | | All (CLV - north of Sahara, CCPW-south of Sahara) | Would any new standard crosswalks be provided? | CCPW | | A |
| 23 | | All (CLV - north of Sahara, CCPW-south of Sahara) | Who would maintain the art at the crossings? County would not want to maintain the art. | CCPW | Noted for inclusion into report.<br>See response to comment 52. | B |
| 24 | | All (CLV - north of Sahara, | In general, where some midblock crossings are located, may want to put the crosswalk at the sidewalk corners rather than midblock. The trail can still meander back towards the middle of the corridor, but if someone needs a sidewalk ramp, then having a connection at the existing sidewalk could be considered. | CCPW | Point is noted and was considered during evaluation of trail and crossing placement during conceptual development.<br>1. Outline pros/cons between trail crossing at existing crosswalks and ramps, | B |

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|---|---|---|---|---|---|---|
| | | CCPW-south of Sahara) | | | or at mid-block locations as currently shown in July 2016 draft concepts. | |
| 25 | | Sheet 9 | The County's Paradise Palm neighborhood street resurfacing project is considering bike lane striping on Pawnee Drive from Desert Inn Road to the Boulevard Mall | CCPW | 1. Include input in report write-up and concept drawings. | A |
| 26 | | All (CLV - north of Sahara, CCPW-south of Sahara) | The 15 mph school zone is good for crossings near the schools. Also, schools have their own signage, and we don't want to confuse the features that are already set up in the school zones with other controls. | CCPW | 1. Include input in report write-up and concept drawings. Evaluate existing and proposed signage at school zones. | B |
| 27 | | All (CLV - north of Sahara, CCPW-south of Sahara) | NO raised crosswalks. YES we can do the Danish Offset crossings | CCPW | 1. Include input in report write-up and concept drawings. Raised crosswalks will not be used in County jurisdiction, Danish offsets will be considered. | A |
| 28 | | All (CLV - north of Sahara, CCPW-south of Sahara) | NO HAWK pedestrian signal crossings. YES we can do PELICAN pedestrian signals instead of HAWK. | CCPW | 2. Include input in report write-up and concept drawings. HAWK will not be used, PELICAN will be considered. | B |
| 29 | | All | Make sure all crosswalks conform to the MUTCD. | CCPW | 1. Include input in report write-up and concept drawings. Crosswalks will conform to MUTCD. | A |
| 30 | | All | Depends on the service level ADT/traffic counts of individual roads. Also need engineering input from CLV and County Public Works staff. In simple terms the busier the street the more formal the crossing treatments may need to be. | CCPW Parks & Rec, Scott Hagen | 1. Include input in report write-up and concept drawings. Team is identifying traffic counts where available and coordinating with CLV/CCPW staff. | B |
| 31 | | All (CLV - north of Sahara, CCPW-south of Sahara) | Elevated crossings, refuge islands where possible, good night lighting and flashes on every street crossing with a 30 mph speed limit or higher. | CLV Planning – Long Range | 1. Include input in report write-up and concept drawings. | B |
| 32 | | All (CLV - north of Sahara, CCPW-south of Sahara) | The City has submitted comments previously on the proposed street crossings.<br>(See attached "Concept_Doc_draft_CLVresp".)<br>Comments transferred below: | CLV:<br>Connie Diso, Rick Schroder, Jonathan Groppenbacher | See Reponses to comments below: | A |
| 33 | | Sheet 3 | Fix typo: "Baker Park" | CLV:<br>PDF Trail concept Sheets:<br>(mphowe) | 1. Fix typo: "Baker Park" | A |
| 34 | | Sheet 3 | For the St. Louis crossing, can we show an improved crosswalk with a refuge island and activated lights? | CLV:<br>PDF Trail concept Sheets:<br>(mphowe) | 1. Evaluate St. Louis crossing for option to include a refuge island and activated lights. | B |

**August 2016**

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|---|---|---|---|---|---|---|
| 35 | | Sheet 4 | Can we move the crosswalk eastwards, so that we reduce the upward jog in the path? It is preferential to have the path cross perpendicular to traffic when on a bicycle. | CLV:<br>PDF Trail concept Sheets:<br>(mphowe) | 1. Evaluate moving crosswalk and softening turns. | B |
| 36 | | Sheet 5 | Can we explore opportunities for pedestrian connections to both the east and west apartment properties?<br><br>Lets make sure that the trailhead here contains plenty of amenities that support and encourage these properties. | CLV:<br>PDF Trail concept Sheets:<br>(mphowe) | 1. Ped connections: Will discuss pedestrian connections in the report in general terms, but also identify specific locations such as this where there may be opportunity. Include a photo example of the gate access some apartment complexes provide for the residents. Decisions to include these are up to developments and residents.<br>2. Report will note that this is a good location for amenities. | B |
| 37 | | Sheet 6 | Can we explore the opportunity for utilizing the drainage easement for pedestrian access? | CLV:<br>PDF Trail concept Sheets:<br>(mphowe) | 1. Evaluate options to underground drainage facility or construct small pedestrian bridge. Identify ROW. | B |
| 38 | | Sheet 8 | Can we look at the potential for a short cycletrack along the west side of Pawnee (fewer driveways), or utilize the alley north of DI, or something. | CLV:<br>PDF Trail concept Sheets:<br>(mphowe) | 1. These options were considered during development of the draft concepts. Will evaluate cycle track and other options further at this location and outline pros/cons to support decision-making. | B |
| 39 | | Sheet 8 | The DI/Pawnee crosswalk should be activated Danish offset here -or something. | CLV:<br>PDF Trail concept Sheets:<br>(mphowe) | 1. Agree. Include input in report write-up and concept drawings. | A |
| 40 | | Sheet 9 | We recommend the trailway to stay along the east side of Nahatan -a cycletrack + pedestrian trailway, if possible. Tall order, but hey we can always default to sidewalks and bike lanes on both sides it anything else. | CLV:<br>PDF Trail concept Sheets:<br>(mphowe) | 1. These options were considered during development of the draft concepts. Will evaluate cycle track and other options further at this location and outline pros/cons to support decision-making. | B |
| 41 | | Sheet 1 | SPENCER @ CHARLESTON<br>• Charleston is NDOT r/w – need NDOT coordination.<br>• Flashing beacons cannot be coordinated with traffic signals. There is an existing beacon at 8th where the Average Daily Traffic Counts (ADT) justify it, but not sure if it's the same at this location.<br>• NDOT has a Charleston pedestrian improvements project currently out to bid; check if this location is included.<br>• HAWKs cannot be at intersections; recommend moving towards the east. | CLV - Transportation Engineering, Connie Diso | Points noted | B |
| 42 | | Sheet 1 | SPENCER @ CURTIS<br>• Raised x-walk should be okay; be sure to follow standards for speed tables<br>• Check with the CLV Fire Department if Curtis is a primary response route and if so, if they will approve the raised x-walk (typical)<br>• There are no ADT counts nearby | CLV - Transportation Engineering, Connie Diso | Points noted | B |
| 43 | | Sheet 2 | SPENCER @ WENGERT<br>• Is there access to the p-lot from the school for children to access trail?<br>• Is school okay with relocated x-walk?<br>• Raised x-walk should be okay; be sure to follow standards for speed tables<br>• Check with the CLV Fire Department if Wengert is a primary response route and if so, if they will approve the raised x-walk | CLV - Transportation Engineering, Connie Diso | Point noted | B |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | (typical)<br>• There are no ADT counts nearby | | | |
| 44 | | Sheet 2 | SPENCER @ BRACKEN<br>• Raised x-walk should be okay; be sure to follow standards for speed tables<br>• Check with the CLV Fire Department if Bracken is a primary response route and if so, if they will approve the raised x-walk (typical)<br>• There are no ADT counts nearby<br>• ADT count on Bracken at Burnham (1999) = 440 (minor) | CLV - Transportation Engineering, Connie Diso | Points noted | B |
| 45 | | Sheet 2/3 | SPENCER @ OAKEY<br>• Check with the CLV Fire Department if Oakey is a primary response route and if so, if they will approve the raised x-walk (typical); CLV Traffic will look to Fire before considering approval given the high ADTs<br>• If it is an at-grade x-walk, the City prefers the x-walk location at the intersection since drivers tend to expect ped x-ings at intersections<br>Note: there was a school expansion proposed at one time | CLV - Transportation Engineering, Connie Diso | Points noted | B |
| 46 | | Sheet 3/4 | SPENCER @ ST LOUIS<br>• St. Louis is a major collector<br>• Flashing beacon should be okay<br>• The City prefers the x-walk location at the intersection since drivers tend to expect ped x-ings at intersections | CLV - Transportation Engineering, Connie Diso | Points noted | B |
| 47 | | Sheet 3/4 | SPENCER @ SAHARA<br>• Ped signal is too close to Spencer<br>• NDOT and County coordination needed (the NDOT coordination is key)<br>• Is a full ped signal proposed? Then the City recommends a full traffic signal at Spencer.<br>• Flashers could work<br>• A HAWK should be located more west away from Spencer and investigated/researched further | CLV - Transportation Engineering, Connie Diso | Points noted | B |
| 48 | | Sheet 1 | Concern about the trail ending at a busy sidewalk (northern terminus at Charleston) | RTC SNS, Rae Lathrop | 1. Evaluate safe options for connections, will include recommendations and/or concerns in the report. | B |
| 49 | | Sheet 4 | Concern about crossing at Sahara Ave, would need to be very big. | RTC SNS, Rae Lathrop | Agree, this concern has been expressed by multiple stakeholders. A pedestrian refuge island with traffic control and advanced warning signs are being recommended to mitigate safety concerns.<br>1. Evaluate size of crossing infrastructure for safety | B |
| 50 | | Sheet 9 | Location where Spencer Street and Nahatan Way intersect: this is hard to navigate as a driver. | RTC SNS, Rae Lathrop | Noted. | A |

**August 2016**

Any recommendations or additions to the locations for art (parkway, community, electrical, mural, etc.) along the trail? *(see PowerPoint handout pages 9-10 for more details)*

| No. | | Referred Document | REVIEWER COMMENT | REVIEWER | CONSULTANT RESPONSE | FINAL DISPOSITION |
|---|---|---|---|---|---|---|
| 51 | | All | Are the murals created on a private building on private property? How does a mural get approval to go on a private building? What kind of agreement is done? How does a public agency maintain a mural on private property? | CCPW | Some murals are located on private commercial buildings, while others were designated on public sides of perimeter walls facing the easement. Any private building owner would need to provide permission for any art installation on their private property and would typically fund/approve/maintain that art. We suggest a committee be formulated (at least one member from each stakeholder agency, along with community representatives) that would help determine appropriate location/scale/theme/type of artwork. Funding sources can help dictate who gets final approval, selection, maintenance – so if agreements are made to use public funds for artworks, then the committee would take a final approval role in the art. | B |
| 52 | | All | Who would fund, own and maintain the art? | CCPW | While this will need to be answered by the stakeholder agencies, we again suggest a committee be formulated that would deal with each location/artwork on a case by case basis. | B |
| 53 | | All | Murals and Community art done by local school kids/residents on appropriate surfaces can increase buy-in of residents.<br>Branding large areas can be interesting.<br>Crossing art may not be practical due to weathering and tire marking of paints or epoxy products used on roads.<br>Any art themes and associated elements can be fun but can be real targets for vandalism. Also play structures can also be targets.<br>Need to evaluate if we primarily want a trail, a bike-way with a linear park/linear art concept or a combination of all. | CCPW Parks & Rec, Scott Hagen | Agree with comment on community buy-in and branding. Agree with art and amenities being targets for vandalism.<br><br>Noted; we propose either making the possible negative impacts a part of the artists brief to consider when designing, and/or limit to the least traveled streets.<br>Noted; although any installation could be considered a target for vandalism. Clark County's ZAP projects have shown a decrease in vandalism to utility boxes that were adorned with artwork. If the play structures and wayfinding were artistic as proposed, they could be protected by the community rather than a target. Typical anti-vandalism applications can be taken to help protect as well.<br><br>1. Poll stakeholders regarding desired goal for trail. Appears there is general interest in having something like a linear park with art and activities and a shared-use pedestrian/bicycle path, but there are concerns on ownership and costs.<br><br>Rendering example of utility corridor transferred to linear park.<br>http://www.rbcra.com/riviera-beach-heights/ | A, B |
| 54 | | All | "Parkway" art should be thoughtfully designed to be pedestrian and bicycle-oriented more than "aerial-oriented". It often happens that these types of designs are obscure or pointless when looking at them from the street and at low speed.<br><br>Art installation along the trail is an opportunity to have community involvement for the artwork itself: schools or neighbors could be included in the process (in a variety of ways and to different degrees).<br><br>Murals seem more appropriate in a more urban context than the type of residential neighborhoods along the trail, which are suburban in nature. | CLV Planning – Long Range | Noted. While the use of "Parkway" art installations are intended to be low cost efforts over a large area, the visual should be considered from the ground view<br>1. Agree on pedestrian level art and community involvement. Include input in report write-up and concept drawings.<br><br>Comment on murals noted and will be included in report, however, murals were also the highest ranked type of art desired from the community based on survey results. A variety of art types were proposed to provide a balance along the entire trail, murals being only one (albeit limited) type.<br>2. We propose to minimize the murals to large (open) areas that have a | A, B |

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| | | | | | signification vantage point from the trail. | |
| 55 | | All | Recommend art at the major, collector and possibly the local roads as “gateways” to the trail. High visibility at these locations will serve to hinder vandalism. | CLV:<br>Connie Diso, Rick Schroder, Jonathan Groppenbacher | 1. Agree. Include input in report write-up and concept drawings. | A |
| 56 | | Sheet 1 | We agree that a mural along the retaining wall here (at northern trailhead location, shopping center across from Wells Fargo) can be very interesting; however, we are reluctant to propose murals within the residential neighborhoods. We believe there is more opportunity for bas relief or sculptural elements rather than murals –as murals are a good indicator species for the urban environment, whereas sculptural art would fit the long suburban walls found along Spencer | CLV:<br>PDF Trail concept Sheets:<br>(mphowe, lmastino) | Comment on murals noted and will be included in report, however, murals were also the highest ranked type of art desired from the community based on survey results.<br>1. We propose the art type ‘mural’ does not need to be limited to a 2D installation. Bas relief or sculptural elements can be suggested to be incorporated into these larger installations. | A, B |

**2. <u>Take a look at the trailhead design concepts:</u>**

Do you have any suggestions on the <u>trailhead designs</u>?

| No. | | Referred Document | REVIEWER COMMENT | REVIEWER | CONSULTANT RESPONSE | FINAL DISPOSITION |
|---|---|---|---|---|---|---|
| 57 | | Trailhead Concept | Plants that use little water, but not cacti or any plants that can cause punctures. | CCPW | Noted, will evaluate and recommend appropriate plants. | B |
| 58 | | Trailhead Concept | If irrigation is provided, who pays for the water meter and the ongoing water bills? | CCPW | See response to comment 16. | B |
| 59 | | Trailhead Concept | Repeat of question one comments regarding locations/amenities. | CCPW Parks & Rec, Scott Hagen | See response to Comment No. 2 | A |
| 60 | | Trailhead Concept | Keep in mind human scale for the trailhead design. Use native trees to create a mini-oasis type of place. | CLV Planning – Long Range | Noted, will evaluate and recommend appropriate trees. | B |
| 61 | | Trailhead Concept | The trailhead designs presented look to be sufficient in amenities, signage and parking (in the larger trailhead design). | CLV:<br>Connie Diso, Rick Schroder, Jonathan Groppenbacher | Noted | NA |
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3. **Take a look at the UNLV Campus Plan handout:**

Are there any routes missing as part of the UNLV bike plan route? If so, which ones?

| No. | | Referred Document | REVIEWER COMMENT | REVIEWER | CONSULTANT RESPONSE | FINAL DISPOSITION |
|---|---|---|---|---|---|---|
| 62 | | Proposed Bike Plan Handout | Defer to UNLV | CCPW | N/A | NA |
| 63 | | Proposed Bike Plan Handout | Not familiar enough with campus to comment | CCPW Parks & Rec, Scott Hagen | N/A | NA |
| 64 | | Proposed Bike Plan Handout | Southwest sector seems too under-served. | CLV Planning – Long Range | Traffic study and survey results showed the lowest pedestrian and cycling activity in the southwest sector. However, the plan should accommodate future connections to the UNLV Master Plan Expansion. | B |
| 65 | | Proposed Bike Plan Handout | The proposed UNLV Bike Plan routes look to be sufficient – according to a staff member who is also a UNLV student. | CLV:<br>Connie Diso, Rick Schroder, Jonathan Groppenbacher | Noted. | NA |
| 66 | | Proposed Bike Plan Handout | Area in front of Library and CBC (Proposed Route NS06) is a free speech zone, so tables and food trucks often take sidewalk | RTC SNS,<br>Rae Lathrop | Agree and this was noted during the campus site visit. During a UNLV meeting on 8/23, UNLV staff indicated that there would no longer be assigned free speech zones on campus, since this will now be open to anywhere on campus. | A |
| | | | | | | |

The project team recommends enhanced bike parking at high-activity buildings on campus, including the Library, Student Union, Recreation & Wellness Center, Classroom Building Complex, Transit Center, and North Side. Are there additional locations you would recommendation for bike lockers on campus***?***

| No. | | Referred Document | REVIEWER COMMENT | REVIEWER | CONSULTANT RESPONSE | FINAL DISPOSITION |
|---|---|---|---|---|---|---|
| 67 | | Proposed Bike Plan Handout | Defer to UNLV | CCPW | N/A | NA |
| 68 | | Proposed Bike Plan Handout | Not familiar enough with campus to comment | CCPW Parks & Rec, Scott Hagen | N/A | NA |
| 69 | | Proposed Bike Plan Handout | The transit Center does not seem a priority, since it is far from destinations. Focus on front and side of buildings of many buildings for bike racks, inexpensive and gaining from “eyes on the street”. For longer-term enhanced bike parking, find 1 or two hubs maximum with a lot of destinations nearby; possible location is between library and classroom building complex. | CLV Planning – Long Range | Noted, and agree. | A, B |
| 70 | | Proposed Bike Plan Handout | Our UNLV student/City employee suggests bike parking at the Frank & Vicki Fertitta Tennis Complex since he sees many people in and around the complex. | CLV:<br>Connie Diso, Rick Schroder, Jonathan Groppenbacher | This input will be included as part of the consolidated survey comments. | A |
| 71 | | Proposed | Area in front of Student Union is very dense with people | RTC SNS, | Agree. This has challenges and benefits. The challenge is fitting in new | B |

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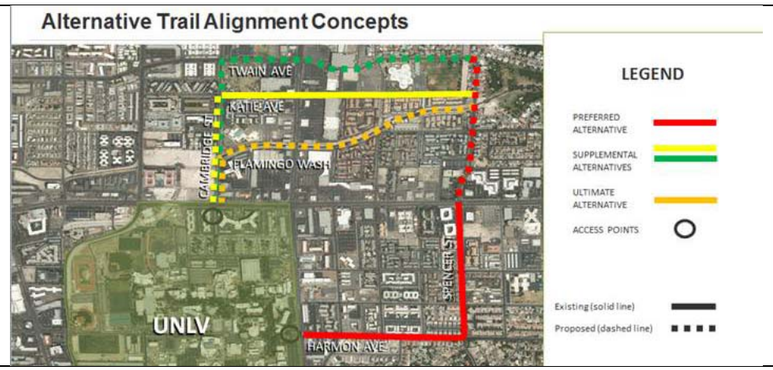
| | | Bike Plan Handout | | Rae Lathrop | bike facilities here and creating traffic to connect to these, the benefit is high visibility and very good security with many people around. | |
| 72 | | Proposed Bike Plan Handout | Check program spaces from student activities office | RTC SNS, Rae Lathrop | UNLV student activity representative was invited to the UNLV-specific meeting on 8/23. | B |
| 73 | | Proposed Bike Plan Handout | - Bike sharing stations on campus should be located in high traffic spots<br>- Rule of thumb is 1200 ft spacing between stations<br>- Given heavy movements (e.g. everyone headed to student union for lunch), there may be a need to balance stations often to allow for bike access and docking station access….or could be addressed through number of docks at each station. | Ron Floth, RTC | 1. Will include this information in the report | A |

**4. <u>Take a look at the PowerPoint Presentation handout:</u>**

What is your preferred route of the four (4) alternative routes from the Spencer Trail to UNLV? *(see Alternative Trail Alignment Concepts slide on page 18)*

| No. | | Referred Document | REVIEWER COMMENT | REVIEWER | CONSULTANT RESPONSE | FINAL DISPOSITION |
|---|---|---|---|---|---|---|
| 74 | |  | Twain is not a public road between Maryland and Algonquin.<br><br>The Flamingo Wash has areas that do not currently have maintenance access roads due to the limited space for the wash.<br><br>There is a concrete bridge over the wash that used to contain tennis courts, as shown towards the top right of the aerial photo below. | CCPW | Noted. Twain between Maryland and Algonquin is within the Boulevard Mall property.<br>1. Will confirm owner and evaluate options.<br><br>Agree, this was noted during our meeting with CCWRD and discussed at the SAC meeting. There is a future project that may add a maintenance road along the wash and may allow for this trail connection to occur. CCWRD was open to this.<br><br>Agree.<br>1. Will note this in the report. | A, B |

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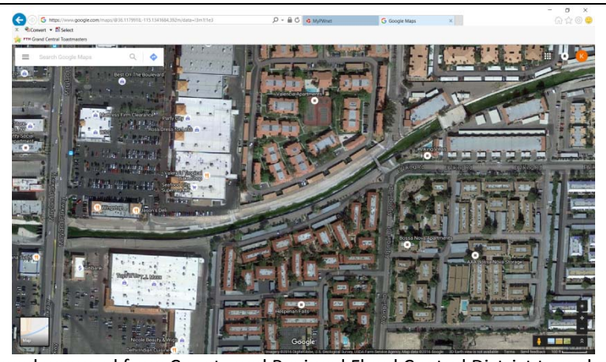
| | | |  Would need approval from County and Regional Flood Control District to make changes to the existing trail, or try to add a trail in the right of way. | | | |
| 75 | | | Spencer/Harmon and then Katie as alternate or later addition. | CCPW Parks & Rec, Scott Hagen | Noted, and this is in agreement with the recommendations. | A |
| 76 | | | Orange – Ultimate Alternative | CLV Planning – Long Range | Noted, and this is in agreement with the recommendations. | A |
| 77 | | | The preferred route of the four is the red route that runs along Eastern and Spencer into the core of the UNLV campus. | CLV: Connie Diso, Rick Schroder, Jonathan Groppenbacher | Noted, and this is in agreement with the recommendations. | A |
| 78 | | | Three routes on Cambridge. Overall rec. for bike facility. | RTC SNS, Rae Lathrop | Agree | A |
| 79 | | | How do you cross Flamingo? | RTC SNS, Rae Lathrop | Flamingo at Spencer is a signalized intersection | C |
| | | | | | | |
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What is your preferred name and logo for the Spencer Greenway Trail? (see Proposed Logos slide on page 9)

| No. | | Referred Document | REVIEWER COMMENT | REVIEWER | CONSULTANT RESPONSE | FINAL DISPOSITION |
|---|---|---|---|---|---|---|
| 80 | | Name/Logo Slide | Spencer Connection or Spencer Trail with any of the designs. | CCPW | Noted, and we would like to hear more on reasons for selections. | C |
| 81 | | Name/Logo Slide | Who would own and maintain the trails? | CCPW | See response to comment 16 above. | B |
| 82 | | Name/Logo Slide | 1-B | CCPW Parks & Rec, Scott Hagen | Noted, and we would like to hear more on reasons for selections. | C |

**August 2016**

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| 83 | | Name/Logo Slide | Naming: Spencer Greenway Trail, Spencer Trail, Spencer Greenway. We do not feel that the term “energy” should be in the design/logo | CLV Planning – Long Range | Noted, and we would like to hear more on reasons for selections. | C |
| 84 | | Name/Logo Slide | The preferred name is Spencer Energy Trail; preferred logo is “F”. | CLV: Connie Diso, Rick Schroder, Jonathan Groppenbacher | Noted, and we would like to hear more on reasons for selections. | C |
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**5. Are there any other suggestions you have on the draft materials presented?**

| No. | | Referred Document | REVIEWER COMMENT | REVIEWER | CONSULTANT RESPONSE | FINAL DISPOSITION |
|---|---|---|---|---|---|---|
| 85 | | | There is public right of way located along Desert Inn between Seneca Drive and the trail corridor per the Open Door image shown below.<br><br>Suggest investigating existing right of way limits along Desert Inn, as there is reason to believe there is existing right of way beyond the existing back of sidewalk. | CCPW | 1. Will evaluate ROW along Desert Inn | B |
| 86 | | All | The County does not construct trails for two different uses side by side in an effort to try to separate people and bikes. 5 foot pedestrian and 10 foot bicycle path/trail marked with paint will not keep pedestrians off any part of the facility. We just build 10 foot or 12 foot facilities (some with center strips) and let a mix | CCPW Parks & Rec, Scott Hagen | 1. Trail will be revised as a single mixed –use path with appropriate width. | A |

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| | | | of people use the trails and co-exist/co-use (bikes, people, kids with parents, strollers, walkers, in-line skaters, etc.) | | | |
| 87 | | All | Start focusing more on the landscaping component. Landscape is vital to creating an inviting, desirable area. We have an opportunity to create a top shelf design. Look at the Springs Preserve trails, entry and Valley View frontages for how this environment should be. | CLV Planning – Long Range | Agree | A |
| 88 | | Sheet 9 | At the Desert Inn/Sombrero/Pawnee crossroad, try another alternative (see comments on pdf) | CLV Planning – Long Range | 1. Will evaluate | B |
| 89 | | All | This is a large, wide, area: make sure to thoughtfully scale it down by using trees, shrubs, kiosks, etc. | CLV Planning – Long Range | 1. Will include this recommendation in the report | B |
| 90 | | All | We have no other suggestions. | CLV: Connie Diso, Rick Schroder, Jonathan Groppenbacher | N/A | NA |
| | | | | | | |
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# SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

STAKEHOLDER ADVISORY COMMITTEE MEETING #4

**COMMENT TRACKING (Received during or after meeting)**

*DECEMBER 2016*

***FINAL DISPOSITION LEGEND:*** ***A-Accept Comment, B-Will Evaluate, C-Clarify Comment, D-Delete Comment, NA – Noted, no action required***

1. **Take a look at the Trail Concept Maps:**
   a. Do you agree with the two principal trailheads being located at the Wells Fargo (north and Orr Middle School (south)?
   b. Are there additional trailheads that you think are important to include?
   c. Are there any additional details you would like to see directly on the maps (such as different or additional locations for crossings, art opportunities, activities, etc.)?

| No. | | Referred Document | REVIEWER COMMENT | REVIEWER | CONSULTANT RESPONSE | FINAL DISPOSITION |
|---|---|---|---|---|---|---|
| 92 | | | a. Yes | RTC SNS, Rae Lathrop | Noted | NA |
| 93 | | | c. Small trailhead at Sahara | RTC SNS, Rae Lathrop | Agree, will include. Plan now identifies “trail access points” along project that will have a few amenities and enhancements. Locations are identified on maps and elements explained in the text. | A |
| 94 | | | a. Am I missing the location of the trailhead at Orr MS on the conceptual maps? | Sherie Moore, CCSD | Yes, symbol for trailhead is located in NVE corridor. | NA |
| 95 | | | c.<br>• I would recommend murals on the block walls at Crestwood ES.<br>• At the Desert Inn Road and Pawnee intersection, good wayfinding system is needed.<br>• The Pawnee and DI intersection is not stopped controlled. Can any enhanced pedestrian improvements be included on DI at this location? A pedestrian actuated signal would be ideal. The 45 mph speed limit makes crossing DI a formidable task. | Sherie Moore, CCSD | • Will add mural icon here, next to community art icon.<br>• Agree, will note comment on maps “Enhanced Wayfinding Required”<br>• Agree, will note on maps and reference RTC RBPP guide for selecting pedestrian actuated systems. Local jurisdictions are given flexibility for this decision based on guideline. | A |

2. **Please provide comments on the trail alternative alignments:**

   Do you agree with the preferred alternatives selected or have other suggestions?
   a. Connections between Spencer Trail and UNLV campus. The current preferred alternative is Spencer Street to Harmony. A long term preference is via Flamingo Wash.
   b. Desert Inn bypass around substation. The current preferred alternative is to continue the trail to Desert Inn, turn west using sidewalk to reach crossing at Pawnee.
   c. Oakey Boulevard Crossing. The preferred alternative is to align the trail along the eastern most edge of the NV Energy corridor so the trail path is adjacent to Spencer Street and crosses Oakey at the intersection.
   d. Wells Fargo Location. The preferred alternative is to construct a trail adjacent to a new parking lot for trail users that can be accessed and shared as an extension of the Wells Fargo parking lot

| No. | | Referred Document | REVIEWER COMMENT | REVIEWER | CONSULTANT RESPONSE | FINAL DISPOSITION |
|---|---|---|---|---|---|---|
| 96 | | | a. Yes | RTC SNS, Rae Lathrop | Noted | NA |
| 97 | | | b. I would look at widening and providing barrier from sidewalk to street. | RTC SNS, Rae Lathrop | Agree. Sidewalk widening is part of the recommendation at this location. Maps will note this as well as the future transit shelter/rail access point which will act as a barrier as the trail turns. Will add example photo if one is available. Text will also point out that widening will require coordination with property owner. | A |

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| 98 | | | c. Yes | RTC SNS, Rae Lathrop | Noted | NA |
| 99 | | | d. I like the D-1 alternative rather than sharing the parking lot | RTC SNS, Rae Lathrop | Noted. Will also provide color differentiation between alternatives including parking lot. Will note if parking lot is cost prohibitive, there are options for public on-street parking nearby, but then access from these to the trail should be considered in the plan as well as any impacts to residents. | NA |
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3. **Please review the Trail Visualization:** This rendering is intended to show what the trail might look like to generate excitement and support for implementation.
   a. Does this visualization include all the elements you would like to see? Are there any elements that you feel do not belong?
   b. Would you prefer to see a different kind of theme/branding, perhaps something more "playful" and colorful?

| No. | | Referred Document | REVIEWER COMMENT | REVIEWER | CONSULTANT RESPONSE | FINAL DISPOSITION |
|---|---|---|---|---|---|---|
| 100 | | | a. More signage readable from cars so they know what they're passing – major roadways for high speed | RTC SNS, Rae Lathrop | Agree, this recommendation will be included in report text. | A |
| 101 | | | a. I would like to see the power poles, substations and utility boxes incorporated into the visual design at key points. See these links: http://bit.ly/2eeYkh6, http://bit.ly/Vjljyq, http://bit.ly/2fj42Q8, and Google "utility box art". Having interactive *energy* pods (wind turbine, solar lights, weather station) along the trail would be great. Check out the Kanza Education and Science Park for ideas. | Sherie Moore, CCSD | Agree, some example photos such as these were added to the art opportunities during the last community outreach meeting. These were also reviewed with NVE prior to the meeting. | A |
| 102 | | | b. I would like to see energy and electricity incorporated into the theme. | Sherie Moore, CCSD | Agree, this idea was recommended and could be a consideration for an overall trail theme. However, some stakeholders were not in favor of this. An area at Sahara is identified for possible art/energy education opportunity. Some example photos were added to the art opportunities during the last community outreach meeting. These were also reviewed with NVE prior to the meeting. | A |
| | | | Include neighborhood-specific branding in the report text, for example historical preservation and elements for an area such as Paradise Palms where residents are in favor of this. | Cathy Halka | Agree, will include. | A |

4. **Additional Comments:**
   a. Have your comments been properly addressed in the revised concepts? Do you have any additional Comments to share?

| No. | | Referred Document | REVIEWER COMMENT | REVIEWER | CONSULTANT RESPONSE | FINAL DISPOSITION |
|---|---|---|---|---|---|---|
| 103 | | | Page 4 missing legend or trail segment (dashed grey line). | RTC SNS, Rae Lathrop | Will revise trail connection so this is clearer with callout and supporting report text. | A |
| 104 | | | I am concerned about relocating the crosswalk on Wengert from the existing location to line up with the trail. A crosswalk at the trail is needed, however, it is the removing of the existing crosswalk that is problematic. For | Sherie Moore, CCSD | Noted. This area has been revised moving the trailhead to the crossing with a potential path connection behind the school. However, further | A |

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| | | | students traveling east to Crestwood Elementary on Wengert, by crossing at the trail alignment, students will have to navigate the entry and exit driveway to the parking lot. This will increase student pedestrian exposure to motor vehicles by three-fold. Can there be some improvement to the pedestrian facilities between the trail crossing and the school grounds? And can the trail developers work with CCSD to consolidate the entrance/exit driveway? Developers may have to pay for restriping the parking lot. | | evaluation of the evaluation for safe connectivity and possible driveway consolidation will be required as part of the design. Any relocation of crosswalks along a safe route to school will require close coordination with the School District taking all the issues identified into consideration. This will be noted in the report. | |
| 105 | | | Are there written notes on coordinating the trail concepts with NV Energy? | Kathleen Kingston, CCPW | There will be written notes about NV Energy coordination in the final plan document which we will share with the SAC at the next meeting. | A |
| 106 | | | An agreement with NVE will be needed. They may ask Clark County to indemnify NVE and Clark County cannot indemnify. | Kathleen Kingston, CCPW | Plan document will identify needed agreement. NV Energy is currently researching with their legal department on the type of agreement needed. | A |
| 107 | | | If SNPLMA money is used to implement the trail plan, then eminent domain cannot be used if any right of way issues arise. | Kathleen Kingston, CCPW | This will be noted in the funding section of the report. | A |
| 108 | | | Are there projections of the amount of pedestrians and bicyclists that may use the trail? | Kathleen Kingston, CCPW | There are no projections on usage at this time, however a survey involving nearly 1000 participants demonstrated 90% level of interest and support for the project. | NA |
| 109 | | | While there have been several public outreach events in an effort to gather information, have the homeowners directly adjacent to the trail been notified and have they had a chance to comment on the conceptual plans? | Kathleen Kingston, CCPW | We mailed postcards to property owners with properties adjacent to the NV Energy Corridor and continuing south on Spencer to Harmon to connect with UNLV. We had around 8 -9 people attend the events last week with their postcard in hand. Some supported the trail, others did not – mostly because of apprehension about crime and opening up the gates to the area behind their homes.<br>Additionally the RTC has distributed updates and links electronically through emails and social media. | NA |
| 110 | | | Attached are the plans for the crossings that are designed with Clark County's Paradise Palms project managed by Richard Robinson of the Design Engineering department. Some sidewalk and sidewalk ramps are being installed with this CCPW project. Some trail crossings will need to be coordinated with the existing crossings when the trail project goes to the design phase.<br>Follow-up discussion:<br>• RTC: Any chance you'd consider a 5-6ft sidewalk instead of 4ft?<br>CCPW: The sidewalk width along Nahatan Way is limited due to the right-of-way (ROW) and the funding source for this project does not allow for the acquisition of ROW.<br>• RTC: How about moving the crosswalk on Nahatan to the west?<br>CCPW: The crossing walk location could not be moved primarily because the limited ROW, on the southern side of Nahatan Way the ROW line is located at the Back of Curb, which would not allow for the installation of a sidewalk or a Sidewalk ramp. Additionally, the current location minimizes the width of the crosswalk | Kathleen Kingston, CCPW | Noted. Report will reference this project.<br><br>We will be able to address the ROW needs as part of the trail project since NV Energy is an active partner and willing to arrange access. The plan will recommend moving the crosswalk (as shown in the draft concept) at the time the trail project is constructed. | A |
| 111 | | | • How are we lighting the trail and who would pay for the ongoing power bills for that light?<br>• Who would own and maintain the trailheads, trails and associated amenities?<br>• Who would maintain the art at the crossings?<br>• If irrigation is provided, who pays for the water meter and the ongoing water bills? | Kathleen Kingston, CCPW | • Report will reference email correspondence from CLV and CCPW on agreement regarding general path forward.<br>• Lighting would be installed as part of the trail construction – so by the local jurisdiction. Maintenance could be by the local jurisdiction, including electric costs. We are, however, recommending solar powered lights to keep it simple. There may be other options for maintenance that each jurisdiction can consider – e.g. partnering with a non-profit | NA |

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| | | | | • The current thought is that NV Energy would own the land and enter into an agreement with the local jurisdiction for that entity to construct and maintain the trail. NV Energy legal department is reviewing this option. An alternative may be for NV Energy to transfer ownership of the land to the local jurisdiction, which would provide a utility easement to NV Energy.<br>• Art at the crossings would be maintained by the local jurisdiction who is responsible for maintaining the ROW. That said – there could be a partnership with OLVF or another non-profit to do maintenance<br>• Irrigation would be installed and maintained by the local jurisdiction | |
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5. **Take a look at the revised UNLV Campus Bike Plan:**
   a. Do you agree with the updated key locations? If not, why?
   b. Do you agree with the updated key routes and the recommendations for these routes? Please indicate any suggested revisions.
   c. Do you agree with the proposed support facilities and there locations? Please indicate any suggested revisions.
   d. The Pilot Program shows recommended best routes and support facilities as an initial test phase for the bike plan. Do you agree with the recommended Pilot Program?
   e. Are there any other suggestions you have on the draft materials presented?

| No. | Referred Document | REVIEWER COMMENT | REVIEWER | CONSULTANT RESPONSE | FINAL DISPOSITION |
|---|---|---|---|---|---|
| 112 | | I wonder if you want to include "shared markings" along the Future Transit Route that goes around Thomas & Mack. I bet cyclists cut through parking lots a lot plus this lot has no proposed upgrades. | RTC SNS,<br>Rae Lathrop | Yes, will include this or bike lanes where constraints or widening permits. | A |
| 113 | | There are no secure bike parking/lockers on West Campus? Consider (possibly) Athletic Center ((conxn to dorms). | RTC SNS,<br>Rae Lathrop | Noted, will include this recommendation and review with UNLV. | A |
| 114 | | • I think the plan should identify a bike facility along the bus route, but instead of a sharrow as suggested by Rae, I'd like to see if a bike lane would work in the space. We received a comment on this as well at the UNLV event. The guy said everyone parks at the lot there by T&M. They could drive their bikes to campus – then they need a safe way to get through the parking lot, into the core of campus to their destination.<br>• 53 bike racks at Transit Center – these are shown as "to be upgraded" I don't think we need to because they already comply with AASHTO. Please remove from map.<br>• Bike lockers – we received a few comments at the outreach events on including these. I think we need to show these as an option for the major parking areas. Could be that there's a mix of a big cluster of racks and a handful of lockers (to start). Could be part of the pilot project. | RTC of Southern Nevada<br>Cathy Halka, ACIP<br>Senior Transportation Planner | • Will include<br>• Agree, will revise plan/legend to reflect this. Will also include general recommendation/national best practices for number of new bike racks that should be included and distance from buildings.<br>• UNLV SAC was generally not in favor of bike lockers however, it would be beneficial to keep these as options for further evaluation. Will include sample photos of how these can be | A |

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| | | • At the SAC meeting, UNLV staff discussed an option for a specific path from Harmon on the east through the core of campus to Harmon on the west.<br>• Plan should recommend UNLV perform an annual counts program of bikes and peds on campus (perhaps run by the TRC) for baseline measurements and performance metrics of the bike plan. Mention options such as video counts and manual human counts. Automatic counts may not work when differentiating bikes from peds.<br>• Recommend a 3/6/10 year plan be implemented<br>• See map for markups | | aesthetically enhanced and can encourage UNLV graphic student or local artist participation.<br>• Harmon path option is included in the plan map<br>• Will include recommendation for count program<br><br>• Will include this recommendation<br>• Will include markups | |
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6. **Additional Feedback:**

Comments on Draft material.

| No. | | Referred Document | REVIEWER COMMENT | REVIEWER | CONSULTANT RESPONSE | FINAL DISPOSITION |
|---|---|---|---|---|---|---|
| 115 | | | See public comments from Dave Cornoyer. A lot of good feedback I think should be incorporated into our concept plans with revisions/labels and into the text of the plan document | RTC of Southern Nevada<br>Cathy Halka, ACIP<br>Senior Transportation Planner | Will incorporate and include comments in text as applicable. Per follow-up meeting with Cathy:<br>• Include perpendicular paths from tail to intersecting streets, or use landscaping (rocks) to channel users, or move trail to adjacent to street if there is space to maintain trail width and any utility pole conflicts can be mitigated.<br>• A comprehensive landscaping plan is not part of the current scope, but will be recommended for the design phase. Comments on landscaping will be included in report for consideration.<br>• Power pole consolidation ad undergrounding will be discussed in the report. It is also demonstrated in the rendering/visualization. Team has been coordinating with NVE and they are reviewing options and costs.<br>• General safety and lighting suggestions will be included. Specific methods, types and locations will be determined in the design phase.<br>• Trash receptacle and dog waste stations are recommended as elements at “trail access points” and trailheads.<br>• Comments on amenities will be included in report for consideration. | A |

SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

# Appendices - General

## 1B Community Outreach List and Public Comments

**Spencer Trail**

*Community Outreach List*

| Organization | First | Last | Title |
|---|---|---|---|
| American Nevada Company | Charles | Van Geel | |
| | Alicia | Halferty | |
| Beverly Green Neighborhood | heidi | swank | Neighborhood President |
| Biking Las Vegas | | | |
| Boulevard Mall | Patrice | Donley | Mall Contact/Arranged Public Meeting Space |
| Cambridge Recreation Center | Chanel | Smith | |
| Caridad | Merideth | Spriggs | Executive Director |
| Century Link | | | |
| Charleston Plaza Shopping Center | | | |
| Christ Church Episcopal | | | |
| Church of Jesus Christ of LDS | | | |
| Clark County Library | Marie | Nicholl-Lynam | Branch Manager |
| City Impact Center | Vic | Caruso | www.cicnv.org |
| City of Las Vegas - Parks Dept. | Mike | Habighorst | |
| CCSD distribution of materials | Dr. | Barton | 702-799-5475 |
| | Sherie | Moore | |
| Clark County - Parks & Recreation Dept. | Greg | Bernhardt | CC P&R |
| Commissioner Giunchigliani | Marcie | Whelan | |
| | Tamara | Williams | |
| Community garden groups | | | |
| Council Member Bob Coffin | | | |
| Council assistant to Coffin | Maria Jose | Norero | Special Assistant |
| Crestwood neighborhood | Ashlee | Lee | President |
| Desert Springs Hospital | | | |
| Downtown Project | | | |
| Freemont East District | | | |
| Five Points Business Association | Adam | Foulad | |
| Francisco Park | | | |
| Friends of Winchester | | | |
| Grace Communion | Ruel | Guerrero | Communities and Counseling |
| Griffith Community Center | Yudylen | Roman | |
| | Lorne | Cramer | |
| Hillside Heights neighborhood | | | |
| Huntridge neighborhood | Melissa | Clary | 702-277-4566 |
| | Kathleen | Kahr | |
| Innovations International Charter School | Laurie | Collins | 702.216.4337 |
| John S Park Neighborhood | Dayvid | Figler | Neighborhood President |
| La Cuesta | Joan | Ernst | CAMCO |
| La Cuesta Condos (Katie at Spencer) | Donna | Palladino | La Cuesta Condos |
| Las Vegas Bicycle Club | Lisa | Caterbone | Webmaster |
| Las Vegas Country Club - Master Assoc Mngmt Office | Anne | Calarco | General Manager |
| | Krystal | Wilson | Executive Assistant |
| | Gordon | Digby | General Manager/COO |
| Las Vegas National Country Club | Coy | Wood | General Manager |
| Las Vegas Valley Water District | | | |
| Les Rois Cycling Club | | | |
| Lewis Street Corridor | | | |
| Marycrest Neighborhood | Helen | Marshall | Marycrest Manor, Benchmark Association Services |
| Maryland Parkway Coalition | Ric | Jiminez | Chair |
| Maryland Parkway Coalition | Richard | Passo | |
| METRO Police | Peter | Kisfalvi | |
| Nevada Partnership for Homeless Youth | Arash | Ghafoori | Executive Director |

**Spencer Trail**

*Community Outreach List*

| Organization | First | Last | Title |
|---|---|---|---|
| Outside Las Vegas Foundation | Mauricia | Baca | Executive Director |
| Paradise Palms | Dave | Cornoyer | |
| La Vuesta Condos (Katie at Spencer) | Donna | Palladino | |
| Reformation Lutheran Church | Jason | Adams | Pastor |
| Regional Open Space and Trails Working Group | Mauricia | Baca | Director |
| | Jessica | Anderson | |
| **Schools** | | | |
| Robert Lake Elementary School | Larry | McHargue | Principal |
| | Melissa | Dalpee | Assistant Principal |
| | Dr. | Barton | Contact for flyer approval |
| Crestwood Elementary School | Jackie | Richardson | Principal |
| Ruby Thomas Elementary School | Mr. Kabala | | Principal |
| | Linda | Jenrico | SRTS Coordinator |
| William Orr Middle School | | | |
| Fremont Middle School | Anne | Brown | Principal |
| Valley High School | | | |
| Shield of Hope | | | |
| Southern Nevada Bicycle Coalition | Keely | Brooks | President |
| | Marco | Velotta | web volunteer |
| | Sara | Phillips | volunteer |
| Southern Nevada Health District | Nicole | Bungum | |
| | Mindy | Meacham | |
| Southridge neighborhood | Rae | Lathrop | |
| Southwest Gas | Sonya | Headen | Media Relations |
| St. Anne's | | | |
| The Center | Andre | Wade | Director of Operations |
| | Michael | Dimengo | Chief Executive Officer |
| The Vista Group | Michael | Saltman | |
| | Jack | Vickers | Sales/Leasing Agent |
| UNLV | Erin | Breen | Director, Safe Community Partnership |
| UNLV | David | Frommer | |
| UNLV | Tad | McDowell | |
| UNLV | Ed | Fuentes | |
| UNLV - Department of Civil and Environmental Engineering | Hualiang | Teng | Assistant Professor |
| UNLV - School of Community Health Sciences | Courtney | Coughenour | Assistant Professor |
| UNLV - School of Community Health Sciences | Tim | Bungum | Associate Professor |
| UNLV - School of Environmental and Public Affairs | Dana | Bickmore | Associate Professor |
| | Anne | Stevens | |
| UNLV Faculty Senate | | | |
| UNLV Graduate and Professional Student Association | | | |
| UNLV CSUN student government | | | |
| UNLV Classified Staff Council | | | |
| Watkins Glen | | | |
| Winchester Cultural Center | Patrick | Gaffey | Program Supervisor |
| | | | |

**Southern Nevada Bike Shop Listing**

| Bike Shop | Address | City | State | Zip | Phone Number |
|---|---|---|---|---|---|
| All Mountain Cyclery | 1404 Nevada Hwy, Suite C | Boulder City | NV | 89005 | 702-453-2453 |
| Aspen Creek Cycling | | | | | |
| Bike Outpost | | | | | |
| The Bike Shop | 2630 Windmill Pkwy, | Henderson | NV | 89074 | 702-897-1618 |
| Bike World West | 1901 S. Rainbow Blvd. | Las Vegas | NV | 89146 | 702-254-1718 |
| Bike World East | 2320 E. Flamingo Rd. | Las Vegas | NV | 89119 | 702-735-7551 |
| Bike Worx | | | | | |
| Broken Spoke Bikes | 11700 W. Charleston Blvd., Suite B190 | Las Vegas | NV | 89135 | 702-823-1680 |
| First Choice Bicycle | | | | | |
| Irwin Cycles | 10080 W. Tropicana Ave. #165 | Las Vegas | NV | 89147 | 702-625-2453 |
| JT's Bicycle | | | | | |
| Just BMX | | | | | |
| Las Vegas Cyclery | 10575 Discovery Drive | Las Vegas | NV | 89135 | 702-596-2953 |
| Life is a Cycle | 7485 Dean Martin Drive Suite #102 | Las Vegas | NV | 89139 | 702-942-3417 |
| Loop Custom Cyclery | 1312 Nevada Highway Boulder City | Boulder City | NV | 89005 | 702-277-3989 |
| McGhie's Bikes | 4035 S. Fort Apache Road | Las Vegas | NV | 89147 | 702-252-8077 |
| Peloton Sports | 911 N. Buffalo Dr. #101 | Las Vegas | NV | 89128 | 702-363-1991 |
| Pro Cyclery | 7034 W. Charleston Blvd. | Las Vegas | NV | 89117 | 702-228-9460 |
| REI - Boca Park Store | 710 S. Rampart Blvd. | Las Vegas | NV | 89145 | 702-951-4488 |
| River Mountains Bike Shop | 2310 E. Lake Mead Parkway | Henderson | NV | 89015 | 702-564-3058 |
| RTC Bike Center | | | | | |
| Southern Highlands Cyclery | | | | | |
| Southwest Bikes | 7260 W. Azure Dr. #130 | Las Vegas | NV | 89130 | 702-227-7433 |
| Vegas Bike Store | 3955 S. Durango Drive #1 | Las Vegas | NV | 89147 | 702-586-5500 |
| The Vault Bike Shop | 7575 Norman Rockwell Lane Suite 120 | Las Vegas | NV | 89143 | 702-839-9091 |

**The Boulevard Mall Outreach Event - Spencer Greenway Trail & UNLV Campus Bike Plan**
**November 1, 2016; 4pm-7pm; near J.C. Penney's –** *(26 people signed up for email updates)*

- Powerline explosions near Twain – really loud and dangerous. Happened just a couple weeks ago
- Lived on Spencer 43 years. Homeless camp out behind Orr MS. Lots of burglaries happen from backyard walls in that section
- Need to widen Spencer street between Nahatan and Twain – not enough room for cars. Can stick my hand out of my window and touch parked cars.
- Safety of crossings is important
- Concerned with loitering on the trail. Will be an ongoing challenge to keep people out.
- Gloria lives just near Desert Inn, would like a place for kids to ride bikes that's off street and safe. Excited about the trail
- 17th street resident – don't put new power poles near my wall. Don't open up the gates, will cause problems with addicts wandering over – there's a drug building nearby. Doves go back there. Nevada Hawk lives back there – don't displace the Nevada Hawk. Joggers on the trail will scare off the birds. Doesn't like Chinese Elm trees
- Desert landscaping is ok, but needs to be really lush. Don't space plants out among the rocks – cluster them and make sure there are enough. Chilean Mesquite trees (thornless) are a good option. Wants a shade canopy over the trail.
- Breeze block wall could be painted to look fresher – but doesn't want it to be white
- No crazy colored sculptures – prefers calm, muted colors.
- No fake landscaping- hates iron cactus
- Vegas Valley resident– robbed multiple times by jumping back wall. Concerned if area is no longer fenced off – robberies will increase. Issue with all night access to the trail. Will attract homeless and drug users. Wants a use permit to raise backyard fence height. Doesn't see the trail accomplishes shortened riding distance – why build it when bikes can use local streets to cut through? Prefers on-street bike riding. Needs the trail to be lit, with cameras, curfew, and policed. People cut open the fence to get access - I've replaced sections of fencing multiple times because I can't wait for others to do it.
- Helicopters monitor the area looking for criminals. Shoplifters from The Boulevard Mall run back into this area and hide against the walls. Why not just use the space to do a few pocket parks, one at Charleston and a few others, instead of a trail through the area and opening up the fenced off areas.
- Concerned with crime. This isn't Summerlin.
- Trail will be positive for the neighborhood.
- Doesn't want trail near his house (Chad). Keep breeze block – it's historic. Incorporate neighborhood history into the trail – information at kiosks, branding the neighborhood.
- Now it's an eyesore – any improvements to the powerline corridor are appreciated. It's unsafe now. People already walk through the area event though it's fenced off.
- Lives close to UNLV – really like the UNLV bike plan.

**UNLV Outreach Event – Spencer Greenway Trail & UNLV Campus Bike Plan**
**November 3, 2016; 11am-3pm; UNLV Student Union-** *(37 people signed up for email updates)*

- "Spencer is shaky" (road conditions are rough).
- "Need better West East bike connections"
- UNLV to Harmon has kind of rough road conditions.
- Need better access to the airport, possibly from Eastern.
- Pecos is a good thoroughfare.
- Warm Springs and Sunset intersection is a problem for bikes.
- Have to zig-zag to get from North to South and vice versa, not enough straightaways.
- Think about how bikes will travel from the main campus to Koval since UNLV has bought some land down there to develop and up towards the medical district as well.
- UNLV not bike friendly, even pedestrians are aggressive.
- On Maryland it would be preferable to have 2 lanes for traffic and the third one dedicated to bus/bike.
- Suggested to connect North Flamingo Wash trail to Spencer going through golf course.
    - Proposing to connect North and South Flamingo Wash Trail with Spencer Trail
- People often go too fast on Maryland.
- Bike theft really big here
- Bait bikes were mentioned at one point – not sure if anything ever happened with that or if it worked
- Highly favor designed bike paths on Maryland Parkway, and discourage driving on Maryland, especially near UNLV
- Hug fan of Spencer Trail. Owns 3 properties at Spencer and Twain. Issues with homeless people sleeping in the Wash. Portable bathrooms at Orr MS is an issue – attracts homeless. Don't want restrooms on the Spencer Trail anywhere. Lots of car accidents on Spencer at the curve near Twain. Many have driven through houses – homeowners have added boulder rocks and fencing to protect homes. Spencer needs traffic calming – look at the crash reports – happening every 2 weeks.
- Likes separated lanes on the sidewalks for wheeled travelers
- Likes enclosed parking facility
- Prefers bike lockers or access controlled parking area for bikes, theft is a big issue.
- Lives replacing wave racks with better ones
- Big street crossings need flashing crossing signals
- UNLV students should be engaged to do art along Spencer. They are inexpensive and it helps develop their portfolios – supports local artists.
- UNLV needs representation at community events. Unsure of their commitment to biking on campus – they've done very little so far. We need dedicated areas for biking and more secure bike parking. Campus needs free bikes for on-campus use, not rental bikes – students won't spend the money on memberships.

**Public Comments**

| No. | Comment |
|---|---|
| 1 | From: Todd Jones [mailto:tjones@unlv.nevada.edu]<br>Sent: Monday, August 22, 2016 12:24 PM<br>To: Monika Bertaki<br>Subject: spencer greenway<br>To whom it may concern,<br>Just had a look at the spencer Greenway trail plan. It looks very good. I live off charleston and I work at UNLV. I would ride that bike plan if it were available.<br>Best,<br>Dr. Todd Jones<br>Prof of Philosophy, UNLV |
| 2 | From: Michael Howe <elenapellinen@me.com><br>Sent: Thursday, August 18, 2016 8:24 PM<br>To: Cathy Halka<br>Subject: Feedback<br>I am thrilled with the plan for the Spencer Street Project. It looks great! I live in Huntridge and attend classes and events at UNLV and I look forward to riding my bike there instead of driving my car. I hope there are lots of desert native trees along the trail. If possible, could you paint the power lines/substations some interesting/pretty colors? Great work RTC!<br>Elena Pellinen<br>(702)349-3834<br>Sent from my iPhone |
| 3 | From: Howard Watts III <hdubtre@gmail.com><br>Sent: Monday, November 14, 2016 2:51 PM<br>To: Cathy Halka<br>Subject: Feedback on Spencer Greenway<br>Hello,<br>I live near the northern end of the proposed greenway, and I'm excited about the opportunity of having a green pedestrian/bike corridor connecting downtown and the University area. I completely support the project, and after reviewing the materials offer the following feedback:<br>1 Shade is critical to extending the seasonal use of the corridor. Deciduous trees would allow for more sun in the winter, and I very much support the use of desert landscaping. I encourage shading trees located close to the path, with smaller decorative landscaping further out. I also support a "shade & shadow" theme although I'm open to incorporating some whimsical elements as well.<br>2. I like the Urban Energy Corridor branding, followed by the Spencer Connection.<br>3. I support the incorporation of art, especially from University students and downtown residents. I'm open to all the different proposals, especially electrical, wall, and crossing art that incorporates the existing environment.<br>4. I encourage the development of a long-term plan that adds underpasses and overpasses to improve the enjoyability of transit, specifically at the major street crossings.<br>5. I encourage the exploration of community solar gardens or other solar projects being incorporated to generate renewable energy and ideally created shaded spaces as well. Perhaps trailhead parking could have solar covered parking. The energy could be stored and used to power lights along the greenway, or feed into other public infrastructure.<br>6. I encourage using the greenway completely as much as possible up to Kaite. I don't support B-1. I support A2 or A3 as lower-traffic paths to the University.<br>Thanks for your consideration,<br>Howard Watts III |

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| | 1701 S. 14th St.<br>Las Vegas, NV 89104 |
| 4 | From: Jennifer Keene <jennifer.reid.keene@gmail.com><br>Sent: Thursday, August 18, 2016 8:18 PM<br>To: Cathy Halka<br>Subject: Feedback<br>Looks great! Please make it beautiful and safe.<br>Thank you for all your hard work on this important project.<br>Jennifer Keene<br>1215 S. 9th St. |
| 5 | From: Massiel Lemon <oceanrose129@gmail.com><br>Sent: Friday, August 19, 2016 11:53 AM<br>To: Cathy Halka<br>Subject: happy with corridor<br>I'm very excited about the corridor can't wait for it. please send me updates |
| 6 | From: Melissa Clary [mailto:mclary121@gmail.com]<br>Sent: Wednesday, November 16, 2016 1:50 PM<br>To: Cathy Halka<br>Subject: Spencer Greenway Trail Feedback<br>Hi Cathy.<br>Here is my feedback regarding the draft plans for Spencer Greenway Trail:<br>On the Conceptual Trail Map for Vegas Valley to Charleston, where the trail has potential to split off into the Charleston Plaza Shopping Center, I think there needs to be street striping to reflect a bike route that safely enters the parking lot there. That is a busy parking lot and rather than bicycles just entering with vehicular traffic, signage and street striping indicating a bike lane is important.<br>Other than that, the conceptual plans look great and appear to include all major amenities for bike trails.<br>Thanks!<br>Melissa Clary<br>President<br>Huntridge Neighborhood Association<br>702.277.4566 |
| 7 | From: Tim Olson <nostoppin1@icloud.com><br>Sent: Monday, August 22, 2016 9:03 AM<br>To: Cathy Halka; Tim Olson<br>Subject: Re: Spencer Greenway<br>Thank you Cathy, I did find the email, it was lost a bit. I appreciate your time to reply back, and sure hope this goes through! it's been a big problem, with this neighborhood being in the county and not the city. We haven't even been able to get NV Energy to talk to us about such simple things as controlling the weeds here, let alone bringing dialogue about beautifying the easement. I love my house, my neighbors, and my neighborhood, and I think this would help speed us on the way to making it a better place.<br>I know a lot of people in my neighborhood would love the bike path and use it frequently.<br>peace,<br>Tim Olson<br>3540 Spencer St |
| 8 | From: paperdoll57@cox.net [mailto:paperdoll57@cox.net]<br>Sent: Thursday, August 18, 2016 11:25 AM<br>To: Cathy Halka<br>Subject: Spencer bike trail<br>I am very upset about this proposal, infact if It goes forward I will be seriously considering moving away. We have enough break ins and people wandering through the neighborhood now to make me feel unsafe with out inviting more. |
| 9 | From: yudylen roman [mailto:yudylenroman@gmail.com] |

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| | Sent: Thursday, July 21, 2016 12:31 PM<br>To: Cathy Halka<br>Subject: Re: FW: SAC Meeting #3 - Draft materials for review/feedback<br>Hi Cathy,<br>I was looking over the concept map, couldn't help but notice the alternative connection that is going to back up to our building. What are the chances of this actually happening?<br>Yudy |
| 10 | From: Dr. Kairó [mailto:lvgypsy@cox.net]<br>Sent: Thursday, December 22, 2016 3:50 PM<br>To: Cathy Halka; Monika Bertaki<br>Subject: Spencer Greenway And UNLV Campus Bike Plan<br><br>Comments:<br>Spencer Bike lane between Twain and Katie – likes traffic calming benefits because many car crashes. Narrowing roadway will slow down cars on the curve.<br><br>Consolidate poles on one side of the greenway so the other side can be used for higher trees and more shade. Shade is important for trail users.<br>Would like the project to feature trees like Palo verdes, Chilean mesquites.<br>Could new poles look like palm trees in the Paradise Palms area?<br><br>Trail should be talked about by tourists as a nice destination off the strip. Should be as impressive as spaces in Summerlin and Anthem. Lush green upscale.<br><br>- Doc Kairo<br>702.300.3590<br>3702 Spencer St., Las Vegas, NV 89119 |
| 11 | -----Original Message-----<br>From: Kurt Regner [mailto:kurtregner@icloud.com]<br>Sent: Thursday, December 22, 2016 3:42 PM<br>To: Monika Bertaki<br>Subject: Spencer Greenway Trail and UNLV Campus Bike Plan<br><br>To Whom It May Concern:<br><br>I support the Spencer Greenway Trail. I live near Desert Inn and Rainbow and work at UNLV. I have tried to find a safe bike route to work for several years and was very pleased to hear about the Spencer Greenway Trail. As a tax payer of Clark County, the project has my full support!<br><br>Sincerely, Kurt Regner<br>3188 Cambridgeshire Street<br>Las Vegas, NV<br>89146 |
| 12 | From: C-Mick Mickey [mailto:hotroddin57@hotmail.com]<br>Sent: Friday, November 11, 2016 10:44 PM<br>To: Cathy Halka<br>Subject: Spencer Greenway Trail Feedback<br><br>Greetings!<br><br>As a resident of Paradise Palms neighborhood, I feel this trail is a wonderful idea. I noticed in one of the visualization proposals that you have opted to keep the 4 leaf flower breezeblock. I would like to voice my |

| | |
|---|---|
| | opinion that keeping the breezeblock is great and it should be preserved! It is iconic for the neighborhood and is original to the surrounding border of the community. It would actually tie into the neighborhood more if the plans for the trail included adding/ integrating more of this breeze block along the path.<br><br>Thank you<br>Chad Mickey<br>Cayuga Pkwy<br><br><br>From: C-Mick Mickey [mailto:hotroddin57@hotmail.com]<br>Sent: Friday, November 11, 2016 11:39 PM<br>To: Cathy Halka<br>Subject: Spencer Greenway Trail Feedback<br><br>Greetings again,<br><br>A few other thoughts for feedback. I think naming it simply the Spencer Trail is simple and to the point. The others could be misinterpreted as to their purpose. In addition, themes along the trail could always pull from the neighborhoods they are moving through. Paradise Palms and the neighborhoods to the north could inspire a bit more of the Mid-Century Modern look especially into artwork/ sculptures along the trail influencing more simplistic geometric designs.<br><br>Regards<br>Chad Mickey |
| | |
| | |

SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

# Appendices - General

## 1C Survey Results

## Spencer Greenway Trail and UNLV Campus Bike Plan

1. Language (Idioma)

- ◯ English
- ◯ Español

## Spencer Greenway Trail and UNLV Campus Bike Plan

The Regional Transportation Commission is conducting a study to determine the level of community support and desired design elements for two proposed pedestrian and bicycle improvement projects: (1) Spencer Greenway Trail and (2) UNLV Campus Bike Plan. This survey will begin with a general question and then continue by requesting your opinion on each of these proposed projects.

1. How often do you walk or ride a bike (for fun or to get somewhere)?

- ◯ Daily
- ◯ Once a week or more
- ◯ A few times per month
- ◯ A few times per year
- ◯ Never

## Spencer Greenway Trail and UNLV Campus Bike Plan

La Comisión Regional de Transporte está realizando un estudio para determinar el nivel de respaldo de la comunidad y elementos de diseño deseados para dos proyectos propuestos de mejoras para bicicletas y peatones: (1) Senda Spencer Greenway y (2) Plan para Bicicletas en el Campus de la UNLV. Esta encuesta comenzará con una pregunta general y luego le pedirá su opinión sobre cada uno de estos proyectos propuestos.

1. ¿Con qué frecuencia camina o anda en bicicleta (por diversión o para ir a alguna parte)?

- ◯ A diario
- ◯ Una vez por semana o más
- ◯ Algunas veces al mes
- ◯ Algunas veces al año
- ◯ Nunca

**Spencer Greenway Trail and UNLV Campus Bike Plan**

## SPENCER GREENWAY TRAIL FROM UNLV TO DOWNTOWN

The Regional Transportation Commission is conducting a study to determine the level of community support and the desired design elements for a "Spencer Greenway" paved path connecting UNLV and Downtown Las Vegas. The proposed path would be primarily constructed along a 100-foot wide existing utility corridor that runs adjacent to Spencer Street between Charleston Boulevard on the north and Twain/Katie Avenue on the south. Some segments of the path would have connections along surface streets as well. Please provide your feedback on the following survey questions regarding the proposed trail.

1. I feel that a walking and biking trail connecting downtown and UNLV along the Spencer utility corridor would bring benefits to the community:

- ◯ Strongly Agree
- ◯ Agree
- ◯ Neutral
- ◯ Disagree
- ◯ Strongly Disagree

2. What would be the primary reason you would use the proposed trail?

- ◯ Recreation; for fun
- ◯ Transportation (to get where I'm going)
- ◯ Health and exercise
- ◯ I would not use the proposed trail

Other (please specify)

3. Rank your concerns to be addressed if the proposed trail is constructed. When using a computer, you may drag and drop these in order of preference.
(1 = most important, 5 = least important):

- Health, safety and security
- Maintaining privacy of my property
- Effective connections to destinations, easy access to locations
- Access controlled so users can only enter and exit at limited points
- Well-maintained facilities

4. How important are the following features to include in the proposed trail?

| | Not very important | <<< | Neutral | >>> | Very important |
|---|---|---|---|---|---|
| Parking for vehicles | ○ | ○ | ○ | ○ | ○ |
| Kiosks or other informational displays | ○ | ○ | ○ | ○ | ○ |
| Benches and rest areas | ○ | ○ | ○ | ○ | ○ |
| Interactive learning opportunities | ○ | ○ | ○ | ○ | ○ |
| Lighting | ○ | ○ | ○ | ○ | ○ |
| Water fountains | ○ | ○ | ○ | ○ | ○ |
| Shading | ○ | ○ | ○ | ○ | ○ |
| Aesthetic enhancements such as public art and landscaping | ○ | ○ | ○ | ○ | ○ |
| Bike repair station | ○ | ○ | ○ | ○ | ○ |
| Good directional signage and trail markings | ○ | ○ | ○ | ○ | ○ |
| Trash disposal | ○ | ○ | ○ | ○ | ○ |
| Doggie bag stations | ○ | ○ | ○ | ○ | ○ |

Other (please specify)

The following photos are examples of public art options that have been used in other locations.
The art to be considered for the trail will be subject to further evaluation and dependent on factors such as availability of space and budget.

2-DIMENSIONAL

3-DIMENSIONAL

MONUMENT/MEMORIAL

MURAL

FUNCTIONAL

5. What kind of art would you like to see along the proposed trail corridor? Below are examples of kinds of public art. Select all that apply:

- [ ] 2-dimensional
- [ ] 3-dimensional
- [ ] Monument/ Memorial
- [ ] Mural
- [ ] Functional

6. Please add any additional comments you may have regarding the proposed Spencer Greenway Trail.



## SENDA SPENCER GREENWAY DE LA UNLV AL CENTRO (DOWNTOWN)

La Comisión Regional de Transporte está realizando un estudio para determinar el nivel de respaldo de la comunidad y elementos de diseño deseados para una senda pavimentada "Spencer Greenway" que conecte la UNLV y el centro de la ciudad de Las Vegas. La senda propuesta se construiría principalmente a lo largo de un corredor de servicios públicos existente de 100 pies de ancho que corre contiguo a Spencer Street entre Charleston Boulevard en el norte y Twain/Katie Avenue en el sur. Algunos segmentos de la senda también tendrían conexiones con las calles de la ciudad. Por favor, indique su opinión sobre las siguientes preguntas de la encuesta sobre la senda propuesta.

1. 1. Creo que una senda para caminar y andar en bicicleta que conecte el centro de la ciudad y la UNLV a lo largo del corredor de servicios públicos Spencer aportaría beneficios a la comunidad:

- ◯ Totalmente de acuerdo
- ◯ De acuerdo
- ◯ Neutral
- ◯ En desacuerdo
- ◯ Totalmente en desacuerdo

2. ¿Cuál sería la principal razón por la que usaría la senda propuesta?

- ◯ Recreación; por diversión
- ◯ Transporte (para llegar a donde voy)
- ◯ Salud y ejercicio
- ◯ No usaría la senda propuesta

Otra (por favor, especificar)

3. Ordene según la importancia sus preocupaciones si se construye la senda propuesta. Al usar una computadora, puede arrastrarlos y soltarlos en el orden de preferencia.
(1 = más importante, 5 = menos importante):

- Salud, protección y seguridad
- Mantener la privacidad de mi propiedad
- Conexiones efectivas a los destinos, fácil acceso a lugares
- Acceso controlado para que los usuarios solo puedan entrar y salir en puntos limitados
- Instalaciones bien mantenidas

4. ¿Qué tan importantes son las siguientes características para incluirlas en la senda propuesta?

| | No muy importante | <<< | Neutral | >>> | Muy importante |
|---|---|---|---|---|---|
| Estacionamiento para vehículos | ○ | ○ | ○ | ○ | ○ |
| Kioscos u otras señales informativas | ○ | ○ | ○ | ○ | ○ |
| Bancos y áreas de descanso | ○ | ○ | ○ | ○ | ○ |
| Oportunidades de aprendizaje interactivo | ○ | ○ | ○ | ○ | ○ |
| Iluminación | ○ | ○ | ○ | ○ | ○ |
| Fuentes de agua | ○ | ○ | ○ | ○ | ○ |
| Sombra | ○ | ○ | ○ | ○ | ○ |
| Mejoras estéticas como arte público y paisajismo | ○ | ○ | ○ | ○ | ○ |
| Estación de reparación de bicicletas | ○ | ○ | ○ | ○ | ○ |
| Buena señalización de direcciones y marcado del sendero | ○ | ○ | ○ | ○ | ○ |
| Tachos de basura | ○ | ○ | ○ | ○ | ○ |
| Estaciones con bolsas para sobras | ○ | ○ | ○ | ○ | ○ |

Otra (por favor, especificar)

Las siguientes fotos son ejemplos de opciones de arte público que han sido usados en otros lugares. El arte que se considerará para la senda estará sujeta a evaluaciones adicionales y dependerá de factores tales como disponibilidad de espacio y presupuesto.

2 DIMENSIONES

3 DIMENSIONES

MONUMENTO/HOMENAJE

MURAL

FUNCIONAL

5. ¿Qué tipo de arte le gustaría ver a lo largo del corredor de senda propuesto? Los siguientes son ejemplos de tipos de arte público. Seleccione todas las opciones que apliquen:

- [ ] 2 dimensiones
- [ ] 3 dimensiones
- [ ] Monumento/Homenaje
- [ ] Mural
- [ ] Funcional

6. Por favor, agregue cualquier comentario adicional que pueda tener con respecto a la Senda Spencer Greenway propuesta.

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**Spencer Greenway Trail and UNLV Campus Bike Plan**

## UNLV BIKE PLAN

The Regional Transportation Commission is conducting a study to determine the level of community support and the desired design elements for a bike system at the UNLV main campus on Maryland Parkway. The study is evaluating bicycle connectivity as well as associated amenities like bike parking. Please provide your feedback on the following survey questions regarding the proposed UNLV Campus Bike Plan.

1. How often do you ride a bike on the UNLV campus?

- ◯ Daily
- ◯ A few times a week
- ◯ A few times a month
- ◯ A few times a year
- ◯ Never

2. How would you rate the current biking conditions on the UNLV campus?

- ◯ Excellent
- ◯ Good
- ◯ Fair
- ◯ Poor
- ◯ Neutral

3. If you were to ride your bike to or from UNLV, from which point would you most likely enter or exit the campus?

- ◯ North side (Flamingo Rd)
- ◯ South side (Tropicana Ave)
- ◯ West side (Swenson St)
- ◯ East side (Maryland Pkwy)
- ◯ N/A

4. Rank the most effective improvements for enhanced biking conditions on UNLV campus. When using a computer, you may drag and drop these in order of preference.
(1 = most effective, 5 = least effective):

| | |
|---|---|
| ⠿ ⇕ | Separate and dedicated bike paths |
| ⠿ ⇕ | More bike paths on campus and more connected bike routes |
| ⠿ ⇕ | Better signage |
| ⠿ ⇕ | Improved bike parking options |
| ⠿ ⇕ | On-campus bike maintenance shop |

The following photos are examples of bike parking options that have been used in other locations.
The facilities to be considered for the UNLV campus will be subject to further evaluation and dependent on factors such as availability of space and budget.

BIKE RACKS

BIKE LOCKERS

BIKE CAGE

BIKE STATION
(Indoor bike parking and repair)

5. If UNLV provided secure and convenient bike parking on campus (as shown above), would this increase your interest in riding a bike to UNLV?

- ◯ Yes
- ◯ No
- ◯ Maybe, not sure

6. Rank your most important criteria for bike parking on the UNLV campus. When using a computer, you may drag and drop these in order of preference.
(1 = most important, 6 = least important):

- ⠿ [ ] Secure bike parking with greater protection from theft, vandalism and weather
- ⠿ [ ] Low cost options for bike parking, such as bike racks
- ⠿ [ ] Greater number of bike parking locations
- ⠿ [ ] Mapping for bike parking availability using internet and mobile app accounts
- ⠿ [ ] Ease of access to bike parking with electronic card or keyless access to bike lockers or bike parking areas
- ⠿ [ ] Well-maintained bike parking options (ensuring facilities are kept clean and are consistently functioning correctly)

7. Which of the following places on the UNLV campus would you most likely need bike parking?

| | Least likely to need bike parking | <<< | Neutral | >>> | Most likely to need bike parking |
|---|---|---|---|---|---|
| Thomas & Mack | ○ | ○ | ○ | ○ | ○ |
| Student Union | ○ | ○ | ○ | ○ | ○ |
| Library | ○ | ○ | ○ | ○ | ○ |
| Sports fields | ○ | ○ | ○ | ○ | ○ |
| Artemis Hall | ○ | ○ | ○ | ○ | ○ |
| Recreation and Wellness Center | ○ | ○ | ○ | ○ | ○ |
| Gym | ○ | ○ | ○ | ○ | ○ |
| UNLV Transit Center | ○ | ○ | ○ | ○ | ○ |
| Classroom Building Complex (CBC) | ○ | ○ | ○ | ○ | ○ |

Other (please specify)

8. Please add any additional comments you may have regarding development of the UNLV Campus Bike Plan

9. Personal Information

**Please enter the zip code of your residence**

**Please enter your email to stay updated on the progress of the plan**

La Comisión Regional de Transporte está realizando un estudio para determinar el nivel de respaldo de la comunidad y elementos de diseño deseados para un sistema de bicicletas en el campus principal de la UNLV en Maryland Parkway. El estudio evalúa la conectividad en bicicleta así como instalaciones asociadas tales como estacionamiento de bicicletas. Por favor, indique su opinión en las siguientes preguntas de la encuesta sobre el Plan para Bicicletas en el Campus de la UNLV propuesto.

1. ¿Con qué frecuencia anda en bicicleta en el campus de la UNLV?

- ◯ A diario
- ◯ Algunas veces por semana
- ◯ Algunas veces por mes
- ◯ Algunas veces por año
- ◯ Nunca

2. ¿Cómo calificaría las condiciones actuales para andar en bicicleta en el campus de la UNLV?

- ◯ Excelentes
- ◯ Buenas
- ◯ Aceptables
- ◯ Deficientes
- ◯ Neutral

3. Si viajara en bicicleta a la UNLV o desde la UNLV, ¿desde qué punto es más probable que entre o salga del campus?

- ◯ Lado norte (Flamingo Rd)
- ◯ Lado sur (Tropicana Ave)
- ◯ Lado oeste (Swenson St)
- ◯ Lado este (Maryland Pkwy)
- ◯ No responde

4. Ordene según la efectividad las mejoras para las condiciones para andar en bicicleta en el campus de la UNLV. Al usar una computadora, puede arrastrarlos y soltarlos en el orden de preferencia.
(1 = más efectiva, 5 = menos efectiva):

- Bicisendas separadas y exclusivas
- Más bicisendas en el campus y más rutas para bicicletas conectadas
- Mejor señalización
- Opciones mejoradas para el estacionamiento de bicicletas
- Tienda de mantenimiento de bicicletas dentro del campus

Las siguientes fotos son ejemplos de opciones de estacionamiento para bicicletas que han sido usados en otros lugares. Las instalaciones que se considerará para el campus de la UNLV estarán sujetas a evaluaciones adicionales y dependerán de factores tales como disponibilidad de espacio y presupuesto.

APARCABICICLETAS

CASILLEROS PARA BICICLETAS

JAULA PARA BICICLETAS

ESTACIÓN DE BICICLETAS
(Reparación y estacionamiento de bicicletas interno)

5. Si la UNLV proporcionara un estacionamiento para bicicletas seguro y conveniente en el campus (como se muestra arriba), ¿esto incrementaría su interés en ir en bicicleta a la UNLV?

- ◯ Sí
- ◯ No
- ◯ Tal vez, no estoy seguro

6. Ordene según la importancia los criterios para el estacionamiento de bicicletas en el campus de la UNLV. Al usar una computadora, puede arrastrarlos y soltarlos en el orden de preferencia.
(1 = más importante, 6 = menos importante):

- Estacionamiento para bicicletas seguro con mayor protección contra robo, vandalismo y condiciones climáticas
- Opciones de bajo costo para estacionar bicicletas, como aparcabicicletas
- Mayor cantidad de lugares para estacionar bicicletas
- Mapas de la disponibilidad de estacionamientos para bicicletas mediante internet y cuentas de aplicaciones móviles
- Facilidad de acceso al estacionamiento para bicicletas con una tarjeta electrónica o acceso sin llave a casilleros para bicicletas o áreas de estacionamiento para bicicletas
- Opciones de estacionamiento para bicicletas bien mantenidas (garantizar que las instalaciones se mantengan limpias y que siempre funcionen correctamente)

7. ¿En cuáles de los siguientes lugares dentro del campus de la UNLV es más probable que usted necesite estacionamiento para bicicletas?

| | Menos probable que necesite estacionamiento para bicicletas | <<< | Neutral | >>> | Más probable que necesite estacionamiento para bicicletas |
|---|---|---|---|---|---|
| Thomas & Mack | ○ | ○ | ○ | ○ | ○ |
| Asociación estudiantil | ○ | ○ | ○ | ○ | ○ |
| Biblioteca | ○ | ○ | ○ | ○ | ○ |
| Campos de deportes | ○ | ○ | ○ | ○ | ○ |
| Artemis Hall | ○ | ○ | ○ | ○ | ○ |
| Centro de recreación y bienestar | ○ | ○ | ○ | ○ | ○ |
| Gimnasio | ○ | ○ | ○ | ○ | ○ |
| Centro de Tránsito de UNLV | ○ | ○ | ○ | ○ | ○ |
| Edificio de aulas Complejo (CBC) | ○ | ○ | ○ | ○ | ○ |

Otro (por favor, especificar)

8. Por favor, agregue cualquier comentario adicional que pueda tener con respecto al desarrollo del Plan para Bicicletas en el Campus de la UNLV.

9. Informacion Personal

**Por favor, ingrese el código postal de su residencia.**

**Por favor, ingrese su correo electrónico para recibir actualizaciones sobre el progreso del plan.**

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**Spencer Greenway Trail and UNLV Campus Bike Plan**

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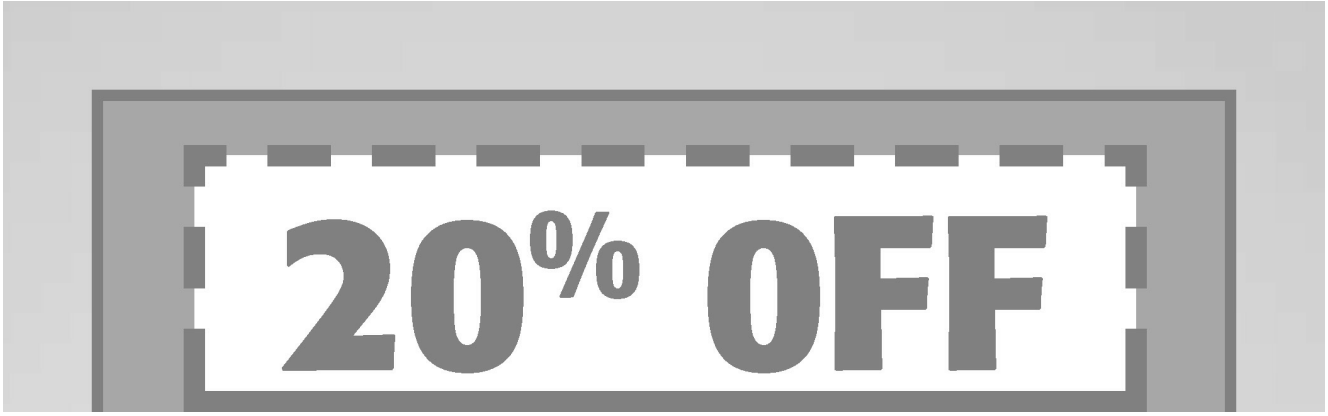

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# Spencer Greenway Trail and UNLV Campus Bike Plan

Friday, June 24, 2016

Powered by SurveyMonkey

# 951

**Total Responses**

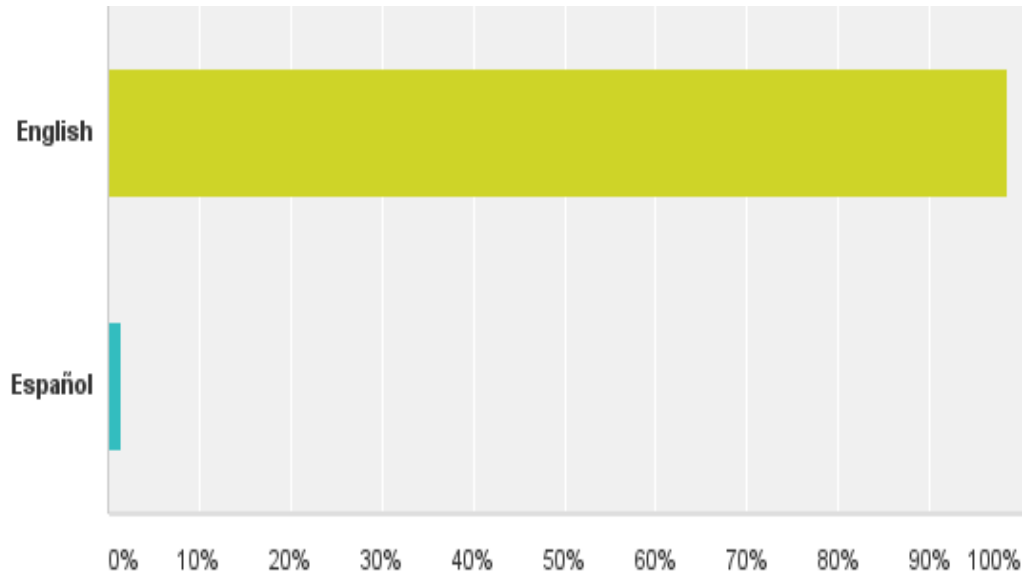
Date Created: Thursday, March 10, 2016

Complete Responses: 688

Powered by SurveyMonkey

# Q1: Language (Idioma)

Answered: 781 Skipped: 170



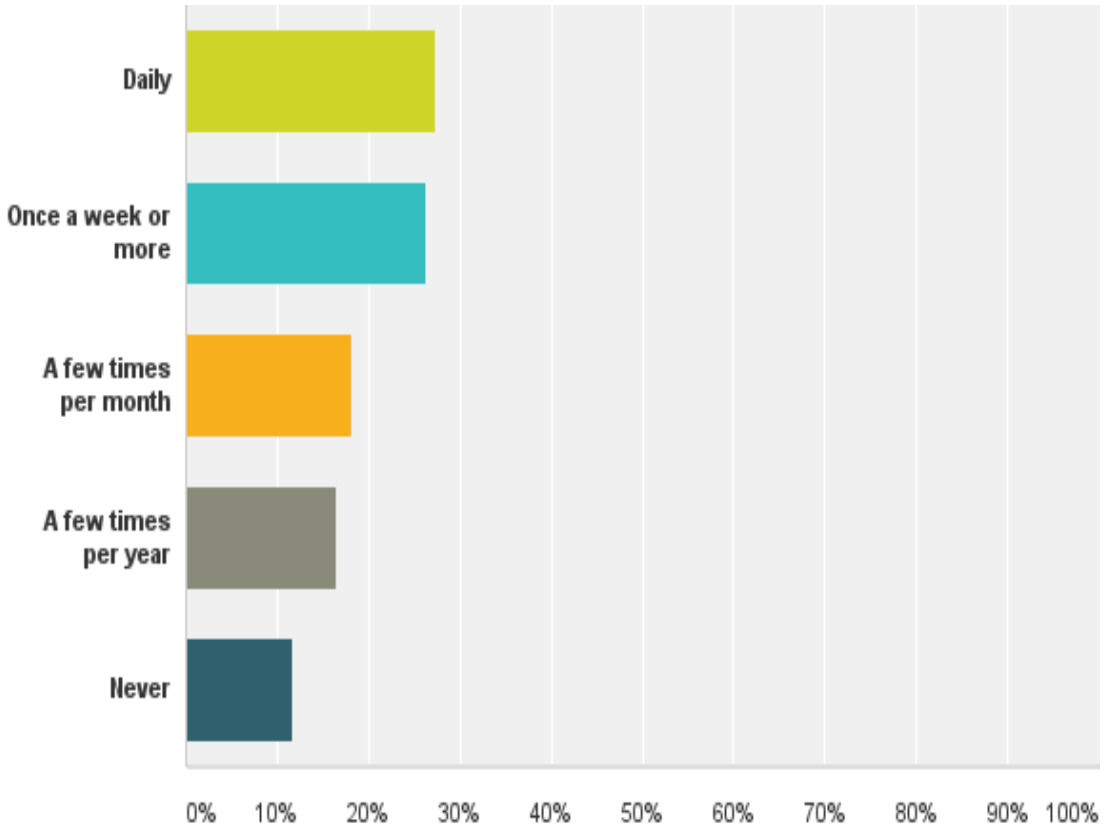
# Q1: Language (Idioma)

Answered: 781 Skipped: 170

| Answer Choices | Responses | |
|---|---|---|
| English | 98.59% | 770 |
| Español | 1.41% | 11 |
| Total | | 781 |

## Q2: How often do you walk or ride a bike (for fun or to get somewhere)?

Answered: 916 Skipped: 35

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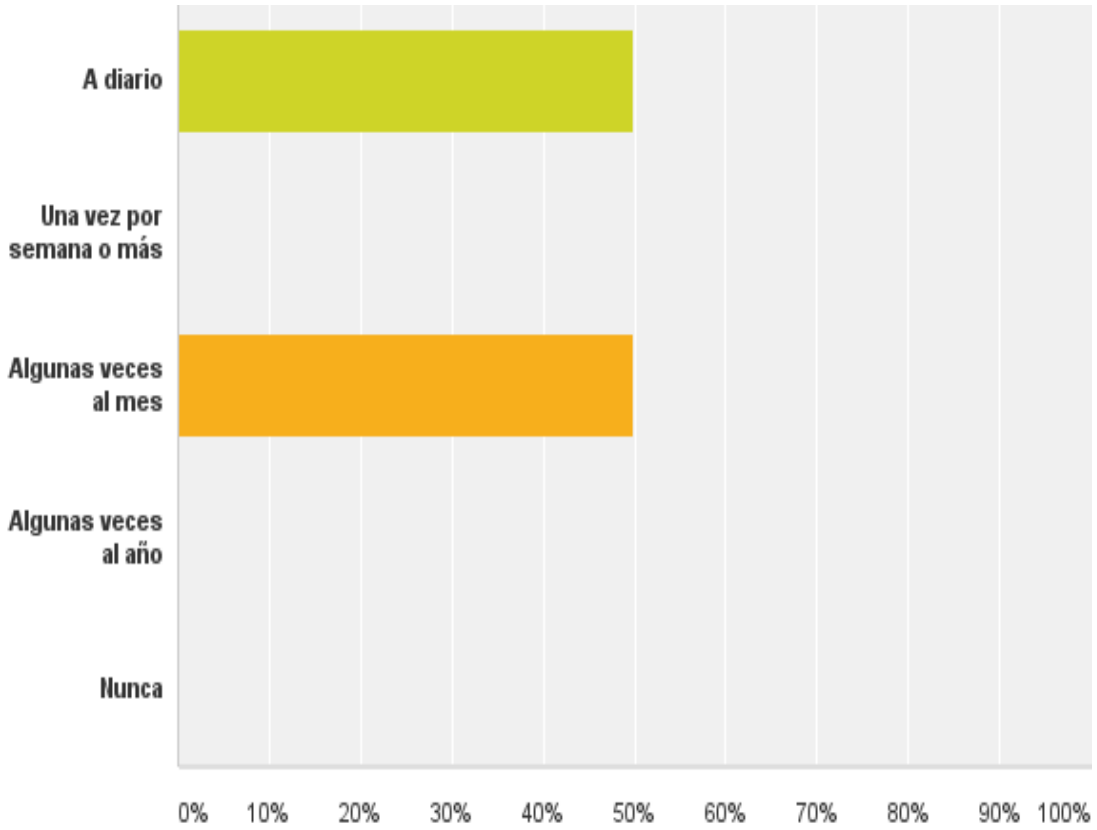
## Q2: How often do you walk or ride a bike (for fun or to get somewhere)?

Answered: 916 Skipped: 35

| Answer Choices | Responses | |
|---|---|---|
| Daily | 27.29% | 250 |
| Once a week or more | 26.20% | 240 |
| A few times per month | 18.23% | 167 |
| A few times per year | 16.59% | 152 |
| Never | 11.68% | 107 |
| Total | | 916 |

## Q3: ¿Con qué frecuencia camina o anda en bicicleta (por diversión o para ir a alguna parte)?

Answered: 2 Skipped: 949

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## Q3: ¿Con qué frecuencia camina o anda en bicicleta (por diversión o para ir a alguna parte)?

Answered: 2 Skipped: 949

| Answer Choices | Responses | |
|---|---|---|
| A diario | 50.00% | 1 |
| Una vez por semana o más | 0.00% | 0 |
| Algunas veces al mes | 50.00% | 1 |
| Algunas veces al año | 0.00% | 0 |
| Nunca | 0.00% | 0 |
| Total | | 2 |

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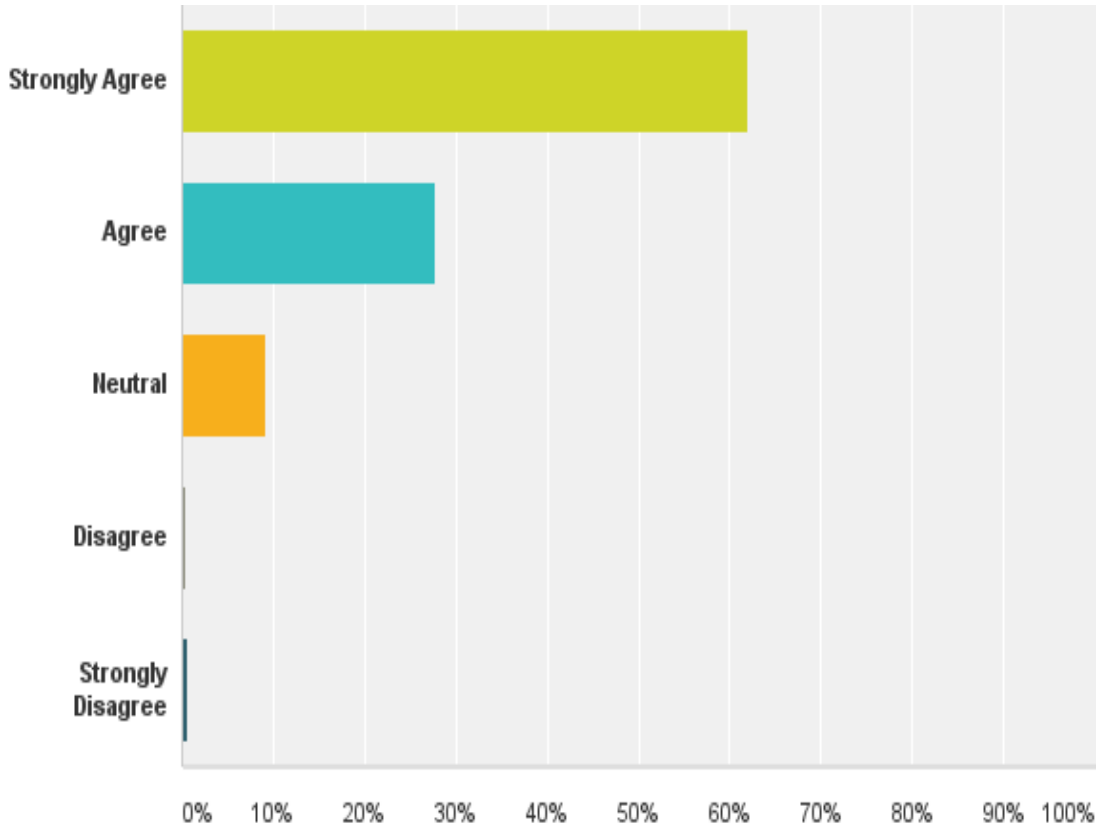
## Q4: I feel that a walking and biking trail connecting downtown and UNLV along the Spencer utility corridor would bring benefits to the community:

Answered: 853 Skipped: 98

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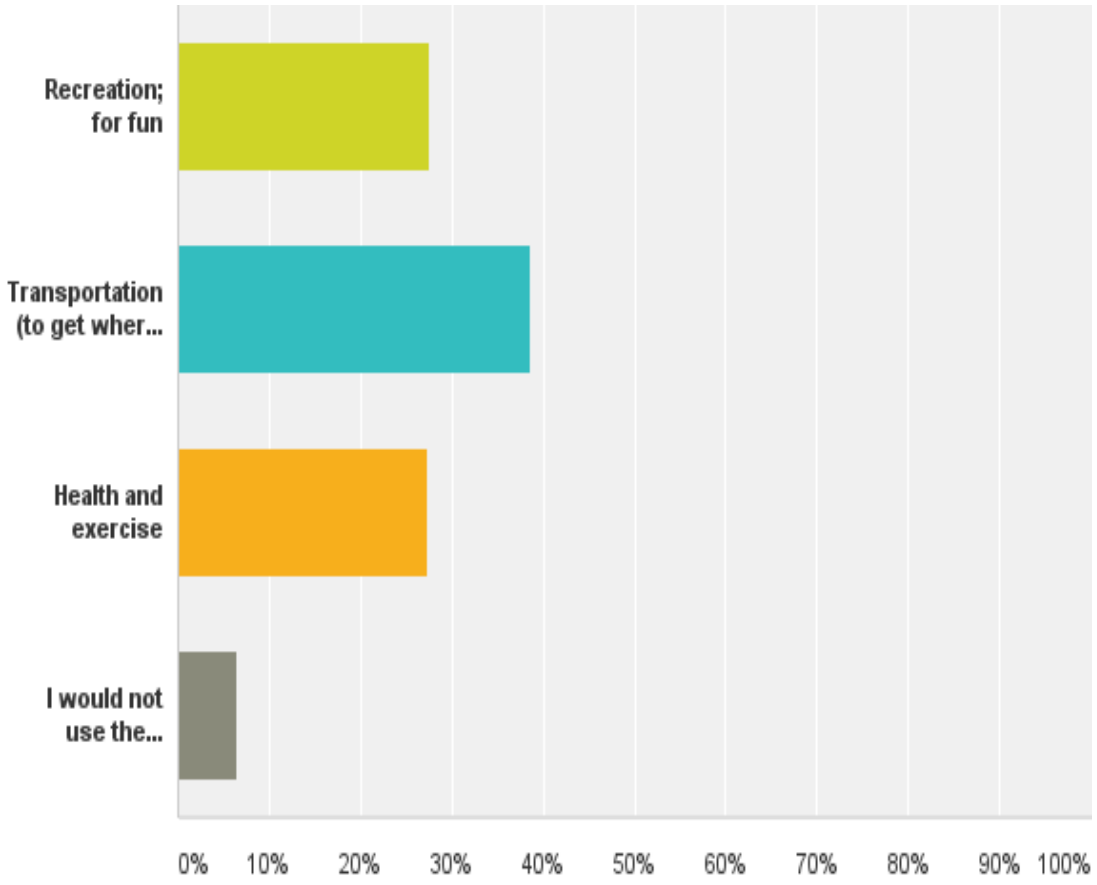
## Q4: I feel that a walking and biking trail connecting downtown and UNLV along the Spencer utility corridor would bring benefits to the community:

Answered: 853 Skipped: 98

| Answer Choices | Responses | |
|---|---|---|
| Strongly Agree | 62.02% | 529 |
| Agree | 27.78% | 237 |
| Neutral | 9.14% | 78 |
| Disagree | 0.47% | 4 |
| Strongly Disagree | 0.59% | 5 |
| Total | | 853 |

## Q5: What would be the primary reason you would use the proposed trail?

Answered: 847 Skipped: 104

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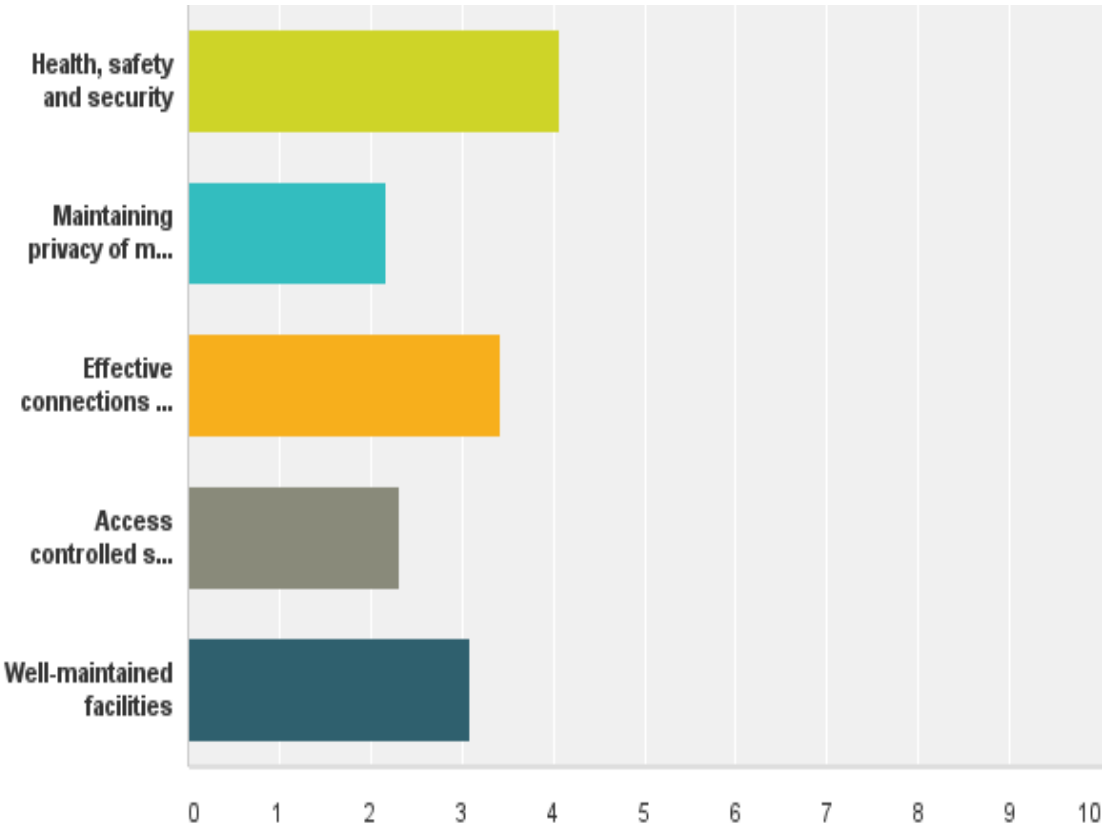
## Q5: What would be the primary reason you would use the proposed trail?

Answered: 847 Skipped: 104

| Answer Choices | Responses | |
|---|---|---|
| Recreation; for fun | 27.51% | 233 |
| Transportation (to get where I'm going) | 38.61% | 327 |
| Health and exercise | 27.39% | 232 |
| I would not use the proposed trail | 6.49% | 55 |
| Total | | 847 |

## Q6: Rank your concerns to be addressed if the proposed trail is constructed. When using a computer, you may drag and drop these in order of preference.(1 = most important, 5 = least important):

Answered: 782 Skipped: 169

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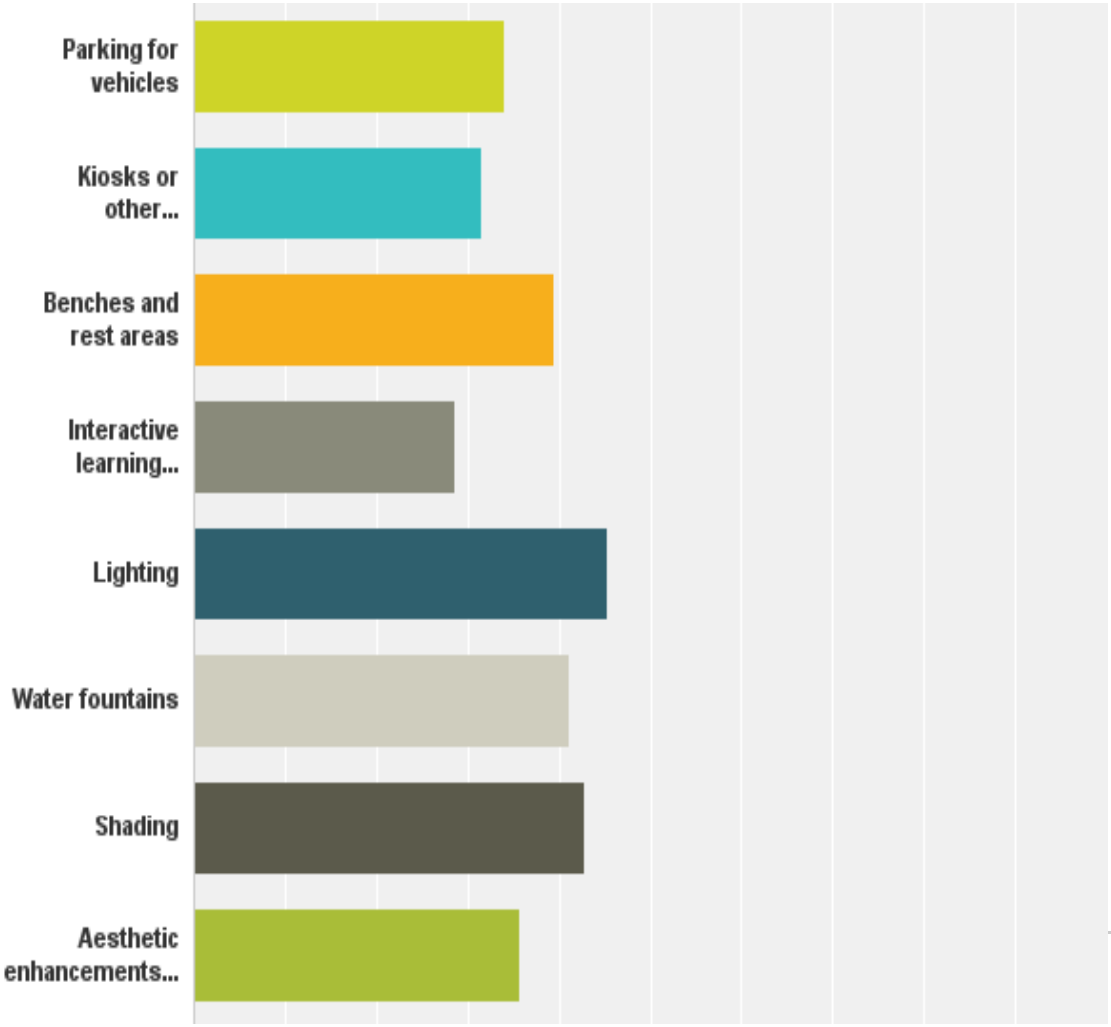
## Q6: Rank your concerns to be addressed if the proposed trail is constructed. When using a computer, you may drag and drop these in order of preference.(1 = most important, 5 = least important):

Answered: 782 Skipped: 169

| | 1 | 2 | 3 | 4 | 5 | Total | Score |
|---|---|---|---|---|---|---|---|
| Health, safety and security | **53.70%** 399 | **19.25%** 143 | **13.86%** 103 | **6.59%** 49 | **6.59%** 49 | 743 | 4.07 |
| Maintaining privacy of my property | **6.65%** 49 | **13.57%** 100 | **13.03%** 96 | **23.47%** 173 | **43.28%** 319 | 737 | 2.17 |
| Effective connections to destinations, easy access to locations | **23.35%** 170 | **27.34%** 199 | **27.06%** 197 | **13.46%** 98 | **8.79%** 64 | 728 | 3.43 |
| Access controlled so users can only enter and exit at limited points | **7.96%** 58 | **11.52%** 84 | **15.09%** 110 | **34.57%** 252 | **30.86%** 225 | 729 | 2.31 |
| Well-maintained facilities | **10.10%** 73 | **27.39%** 198 | **32.64%** 236 | **20.19%** 146 | **9.68%** 70 | 723 | 3.08 |

## Q7: How important are the following features to include in the proposed trail?

Answered: 851 Skipped: 100

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## Q7: How important are the following features to include in the proposed trail?

Answered: 851 Skipped: 100

| | Not very important | <<< | Neutral | >>> | Very important | Total | Weighted Average |
|---|---|---|---|---|---|---|---|
| Parking for vehicles | **12.06%** 102 | **8.87%** 75 | **26.71%** 226 | **30.50%** 258 | **21.87%** 185 | 846 | 3.41 |
| Kiosks or other informational displays | **12.87%** 109 | **11.69%** 99 | **34.00%** 288 | **29.63%** 251 | **11.81%** 100 | 847 | 3.16 |
| Benches and rest areas | **4.15%** 35 | **4.86%** 41 | **16.59%** 140 | **41.59%** 351 | **32.82%** 277 | 844 | 3.94 |
| Interactive learning opportunities | **18.44%** 156 | **14.42%** 122 | **39.83%** 337 | **17.49%** 148 | **9.81%** 83 | 846 | 2.86 |
| Lighting | **1.66%** 14 | **1.42%** 12 | **5.44%** 46 | **24.26%** 205 | **67.22%** 568 | 845 | 4.54 |
| Water fountains | **5.08%** 43 | **4.61%** 39 | **13.36%** 113 | **26.71%** 226 | **50.24%** 425 | 846 | 4.12 |
| Shading | **2.84%** 24 | **2.36%** 20 | **13.00%** 110 | **26.36%** 223 | **55.44%** 469 | 846 | 4.29 |
| Aesthetic enhancements such as public art and | **10.12%** 86 | **8.47%** 72 | **23.65%** 201 | **29.53%** 251 | **28.24%** 240 | 850 | 3.57 |

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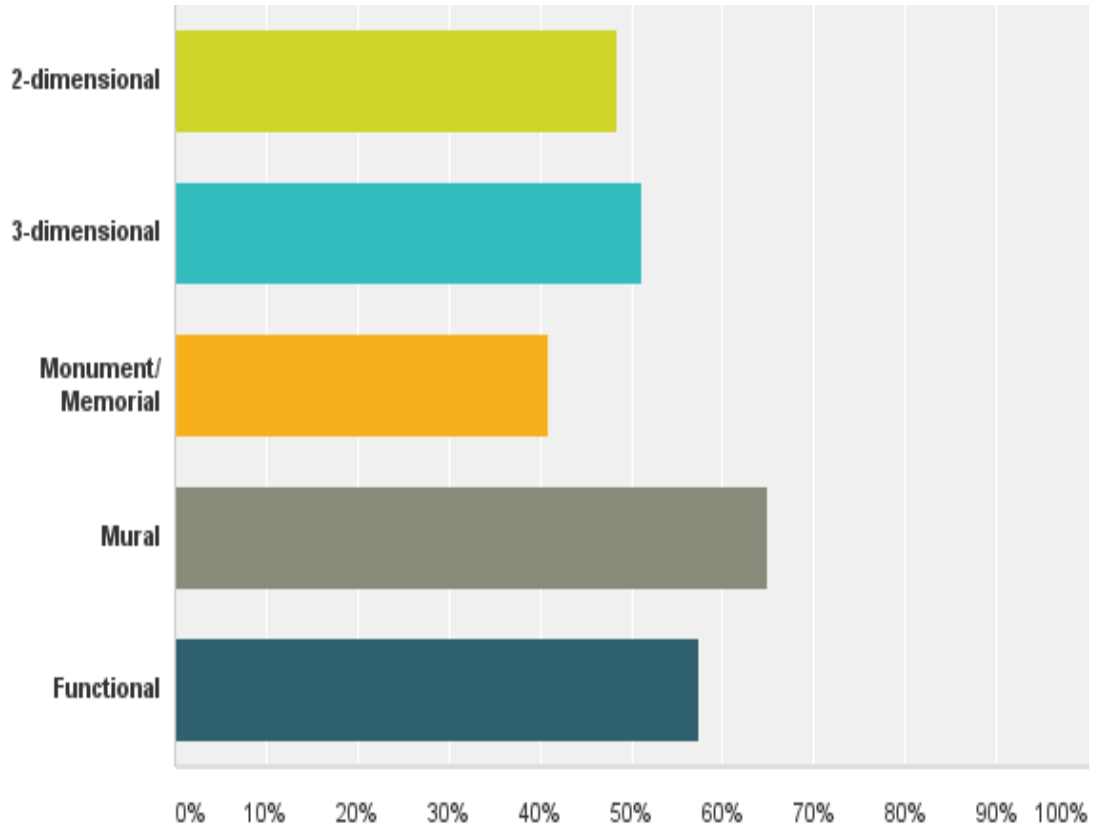
## Q8: What kind of art would you like to see along the proposed trail corridor? Below are examples of kinds of public art. Select all that apply:

Answered: 828 Skipped: 123

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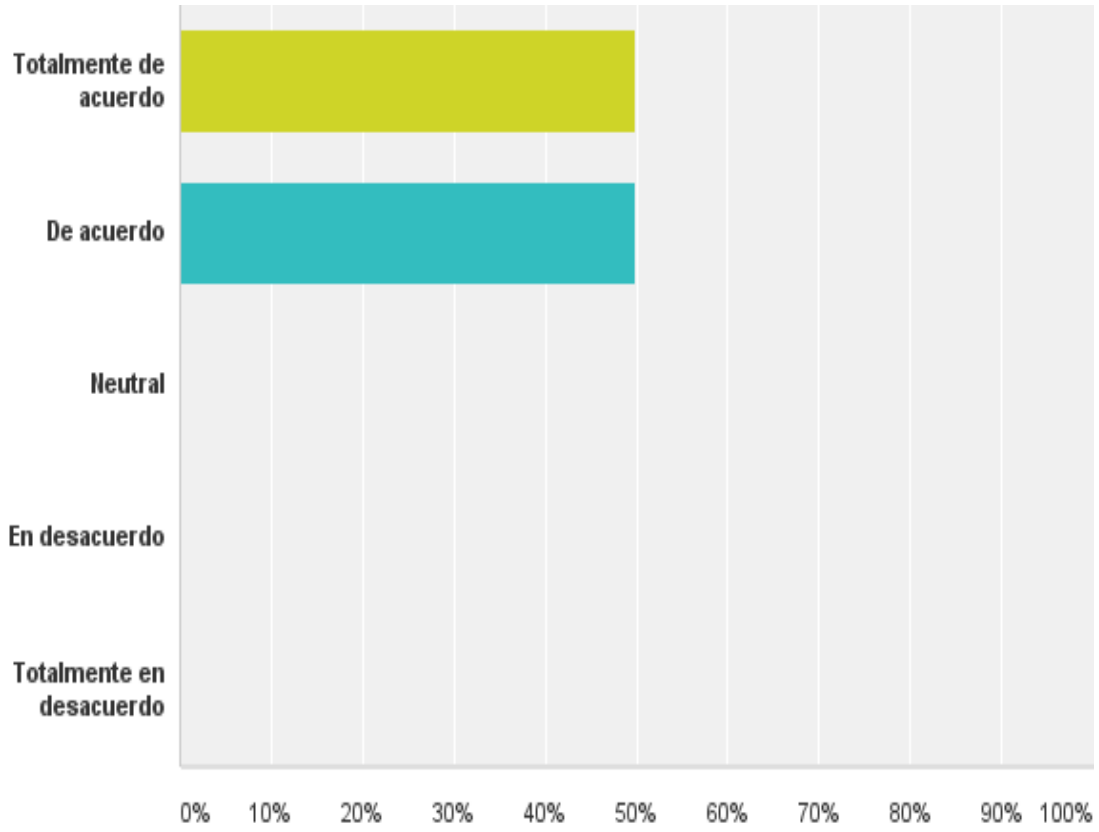
## Q8: What kind of art would you like to see along the proposed trail corridor? Below are examples of kinds of public art. Select all that apply:

Answered: 828 Skipped: 123

| Answer Choices | Responses | |
|---|---|---|
| 2-dimensional | 48.43% | 401 |
| 3-dimensional | 51.21% | 424 |
| Monument/ Memorial | 40.94% | 339 |
| Mural | 64.86% | 537 |
| Functional | 57.37% | 475 |
| Total Respondents: 828 | | |

## Q10: 1. Creo que una senda para caminar y andar en bicicleta que conecte el centro de la ciudad y la UNLV a lo largo del corredor de servicios públicos Spencer aportaría beneficios a la comunidad:

Answered: 2 Skipped: 949

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## Q10: 1. Creo que una senda para caminar y andar en bicicleta que conecte el centro de la ciudad y la UNLV a lo largo del corredor de servicios públicos Spencer aportaría beneficios a la comunidad:

Answered: 2 Skipped: 949

| Answer Choices | Responses | |
|---|---|---|
| Totalmente de acuerdo | 50.00% | 1 |
| De acuerdo | 50.00% | 1 |
| Neutral | 0.00% | 0 |
| En desacuerdo | 0.00% | 0 |
| Totalmente en desacuerdo | 0.00% | 0 |
| Total | | 2 |

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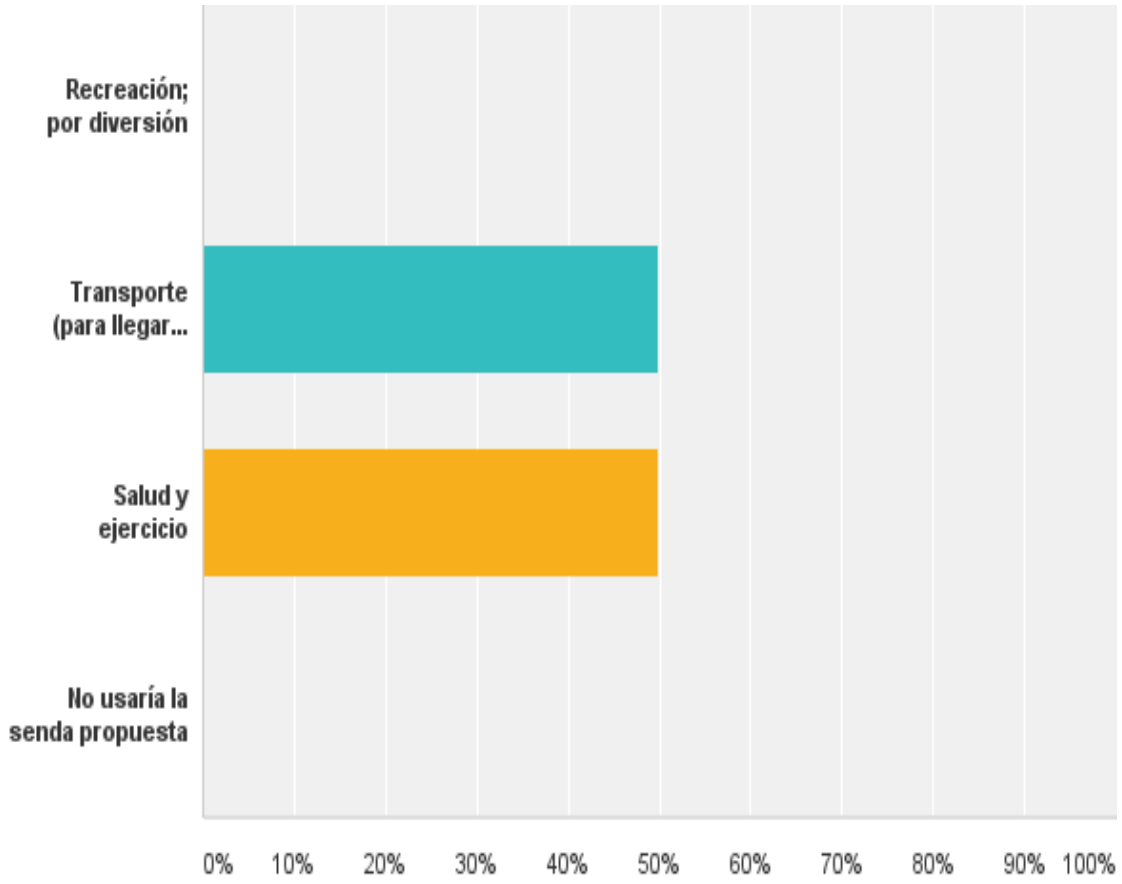
## Q11: ¿Cuál sería la principal razón por la que usaría la senda propuesta?

Answered: 2 Skipped: 949

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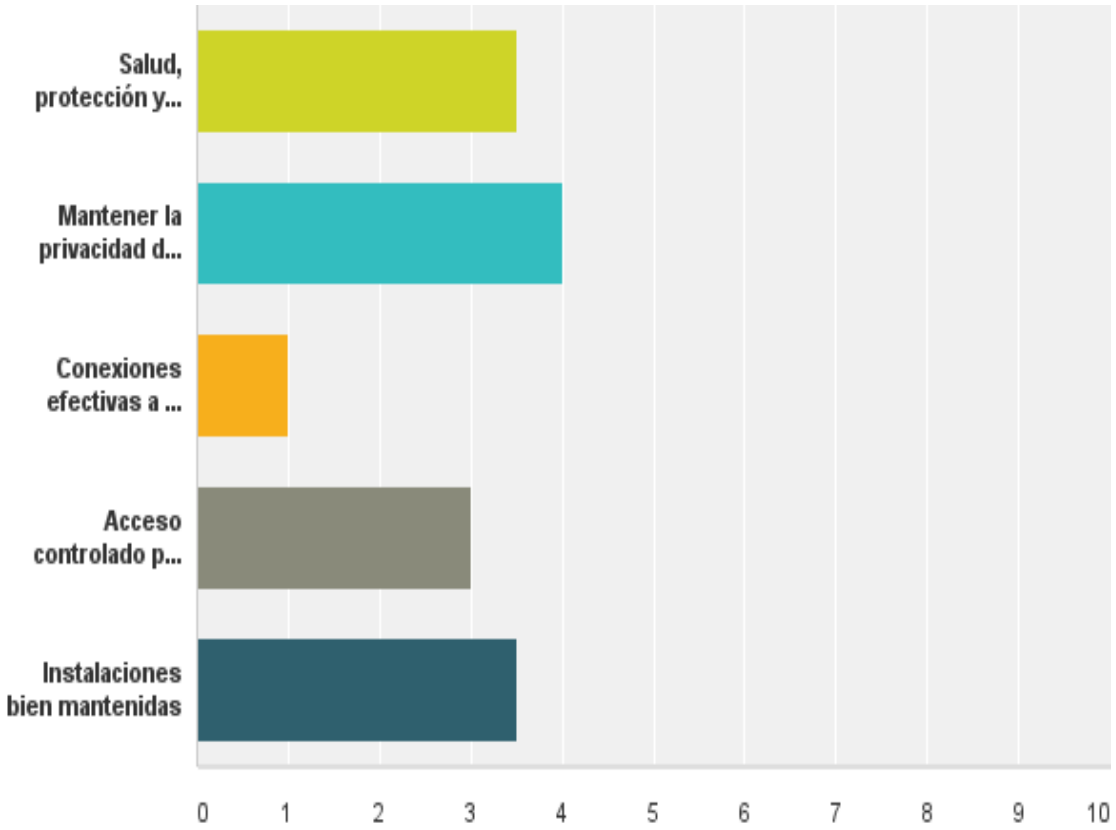
## Q11: ¿Cuál sería la principal razón por la que usaría la senda propuesta?

Answered: 2 Skipped: 949

| Answer Choices | Responses | |
|---|---|---|
| Recreación; por diversión | 0.00% | 0 |
| Transporte (para llegar a donde voy) | 50.00% | 1 |
| Salud y ejercicio | 50.00% | 1 |
| No usaría la senda propuesta | 0.00% | 0 |
| Total | | 2 |

## Q12: Ordene según la importancia sus preocupaciones si se construye la senda propuesta. Al usar una computadora, puede arrastrarlos y soltarlos en el orden de preferencia. (1 = más importante, 5 = menos importante):

Answered: 2 Skipped: 949

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## Q12: Ordene según la importancia sus preocupaciones si se construye la senda propuesta. Al usar una computadora, puede arrastrarlos y soltarlos en el orden de preferencia. (1 = más importante, 5 = menos importante):

Answered: 2 Skipped: 949

| | 1 | 2 | 3 | 4 | 5 | Total | Score |
|---|---|---|---|---|---|---|---|
| Salud, protección y seguridad | **50.00%** 1 | **0.00%** 0 | **0.00%** 0 | **50.00%** 1 | **0.00%** 0 | 2 | 3.50 |
| Mantener la privacidad de mi propiedad | **50.00%** 1 | **0.00%** 0 | **50.00%** 1 | **0.00%** 0 | **0.00%** 0 | 2 | 4.00 |
| Conexiones efectivas a los destinos, fácil acceso a lugares | **0.00%** 0 | **0.00%** 0 | **0.00%** 0 | **0.00%** 0 | **100.00%** 2 | 2 | 1.00 |
| Acceso controlado para que los usuarios solo puedan entrar y salir en puntos limitados | **0.00%** 0 | **50.00%** 1 | **0.00%** 0 | **50.00%** 1 | **0.00%** 0 | 2 | 3.00 |
| Instalaciones bien mantenidas | **0.00%** 0 | **50.00%** 1 | **50.00%** 1 | **0.00%** 0 | **0.00%** 0 | 2 | 3.50 |

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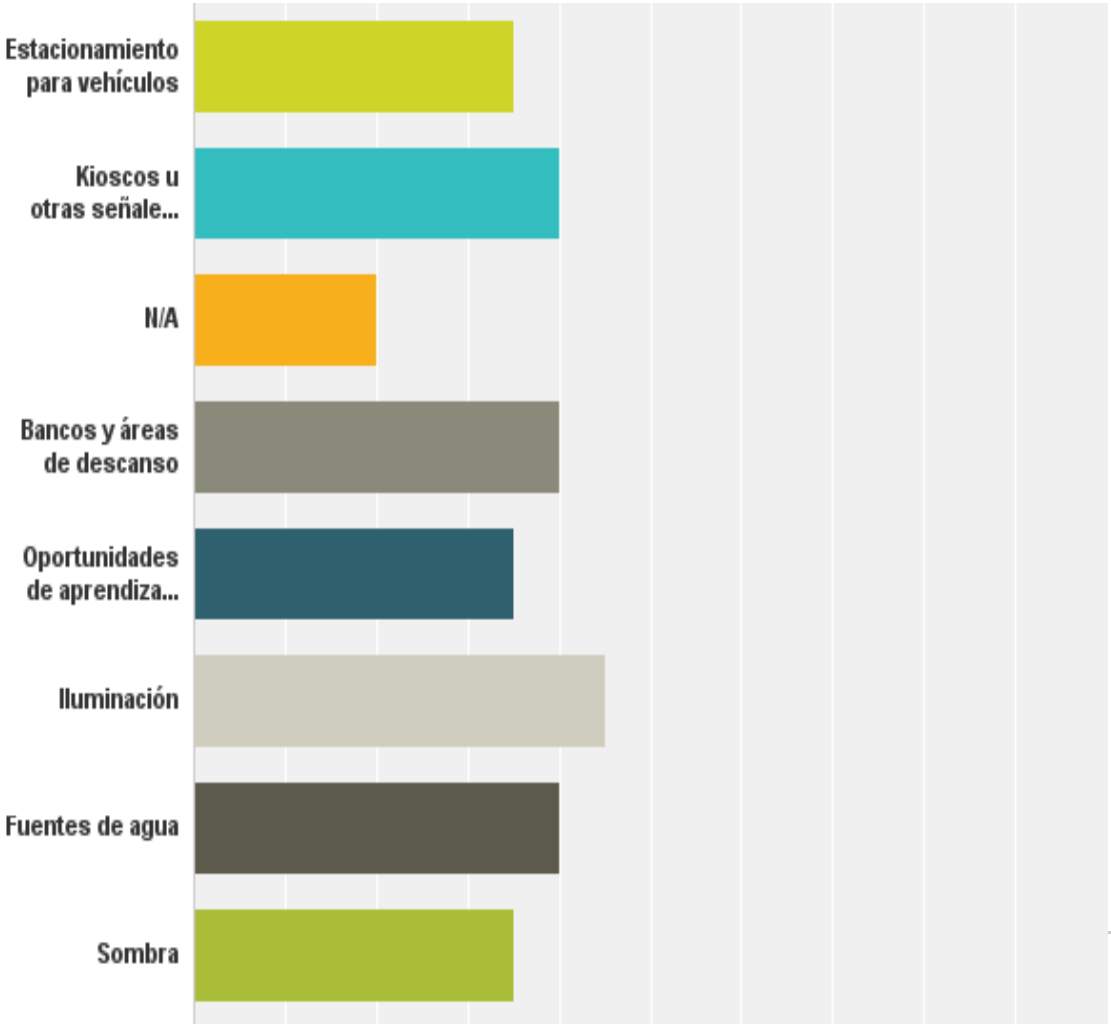
## Q13: ¿Qué tan importantes son las siguientes características para incluirlas en la senda propuesta?

Answered: 2 Skipped: 949

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## Q13: ¿Qué tan importantes son las siguientes características para incluirlas en la senda propuesta?

Answered: 2 Skipped: 949

| | No muy importante | <<< | Neutral | >>> | Muy importante | Total | Weighted Average |
|---|---|---|---|---|---|---|---|
| Estacionamiento para vehículos | 0.00% 0 | 0.00% 0 | 50.00% 1 | 50.00% 1 | 0.00% 0 | 2 | 3.50 |
| Kioscos u otras señales informativas | 0.00% 0 | 0.00% 0 | 0.00% 0 | 100.00% 1 | 0.00% 0 | 1 | 4.00 |
| N/A | 0.00% 0 | 100.00% 1 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 1 | 2.00 |
| Bancos y áreas de descanso | 0.00% 0 | 0.00% 0 | 50.00% 1 | 0.00% 0 | 50.00% 1 | 2 | 4.00 |
| Oportunidades de aprendizaje interactivo | 0.00% 0 | 0.00% 0 | 50.00% 1 | 50.00% 1 | 0.00% 0 | 2 | 3.50 |
| Iluminación | 0.00% 0 | 0.00% 0 | 0.00% 0 | 50.00% 1 | 50.00% 1 | 2 | 4.50 |
| Fuentes de agua | 0.00% 0 | 0.00% 0 | 0.00% 0 | 100.00% 2 | 0.00% 0 | 2 | 4.00 |
| Sombra | 0.00% 0 | 0.00% 0 | 50.00% 1 | 50.00% 1 | 0.00% 0 | 2 | 3.50 |

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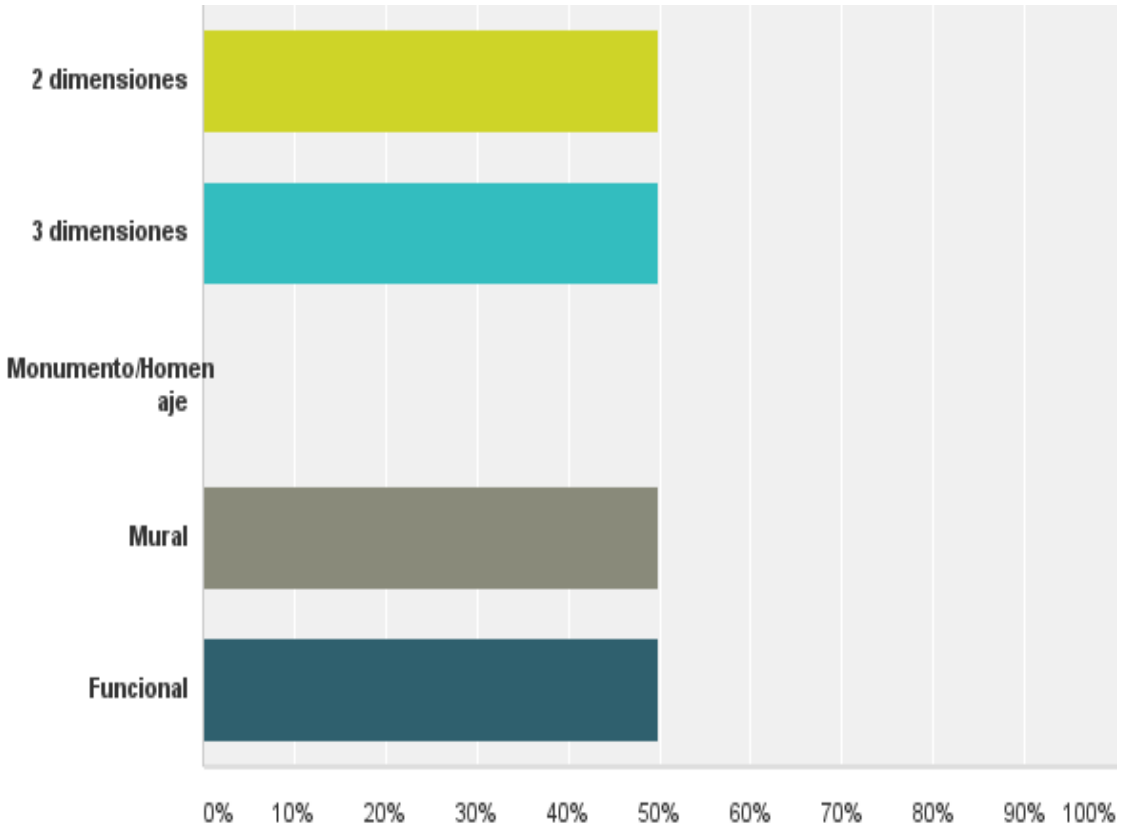
## Q14: ¿Qué tipo de arte le gustaría ver a lo largo del corredor de senda propuesto? Los siguientes son ejemplos de tipos de arte público. Seleccione todas las opciones que apliquen:

Answered: 2 Skipped: 949

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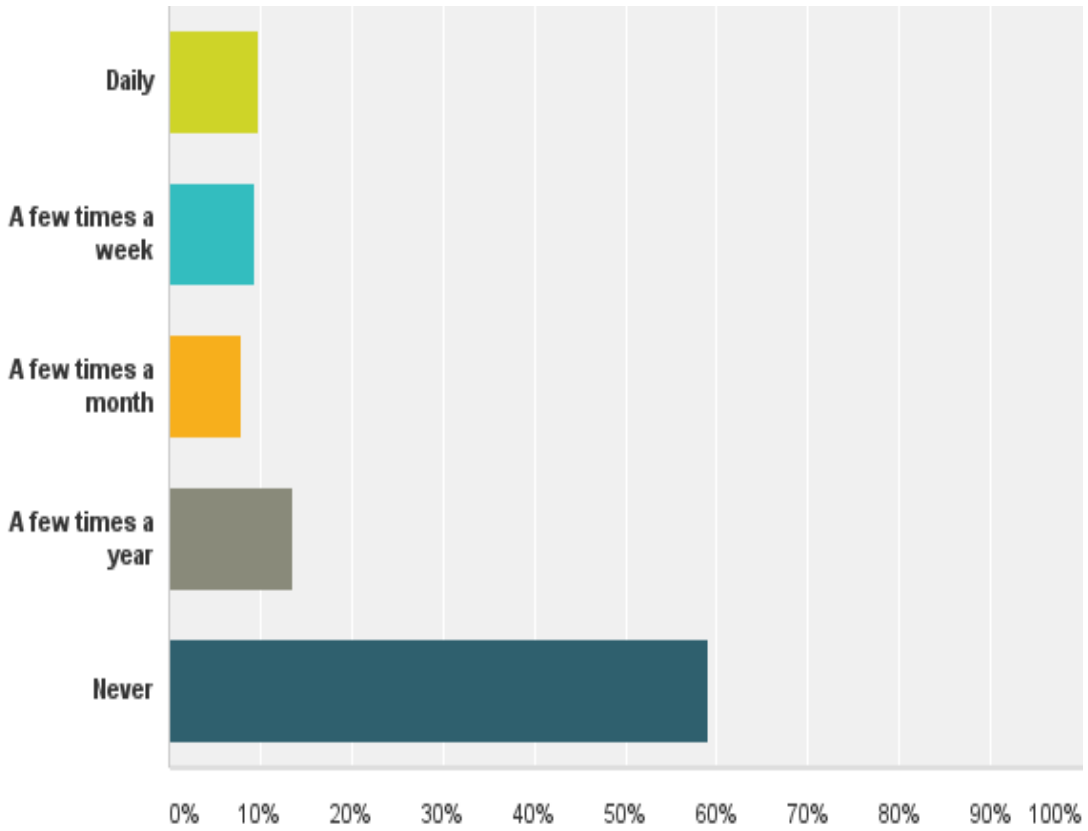
## Q14: ¿Qué tipo de arte le gustaría ver a lo largo del corredor de senda propuesto? Los siguientes son ejemplos de tipos de arte público. Seleccione todas las opciones que apliquen:

Answered: 2 Skipped: 949

| Answer Choices | Responses | |
|---|---|---|
| 2 dimensiones | 50.00% | 1 |
| 3 dimensiones | 50.00% | 1 |
| Monumento/Homenaje | 0.00% | 0 |
| Mural | 50.00% | 1 |
| Funcional | 50.00% | 1 |
| Total Respondents: 2 | | |

## Q16: How often do you ride a bike on the UNLV campus?

Answered: 807 Skipped: 144

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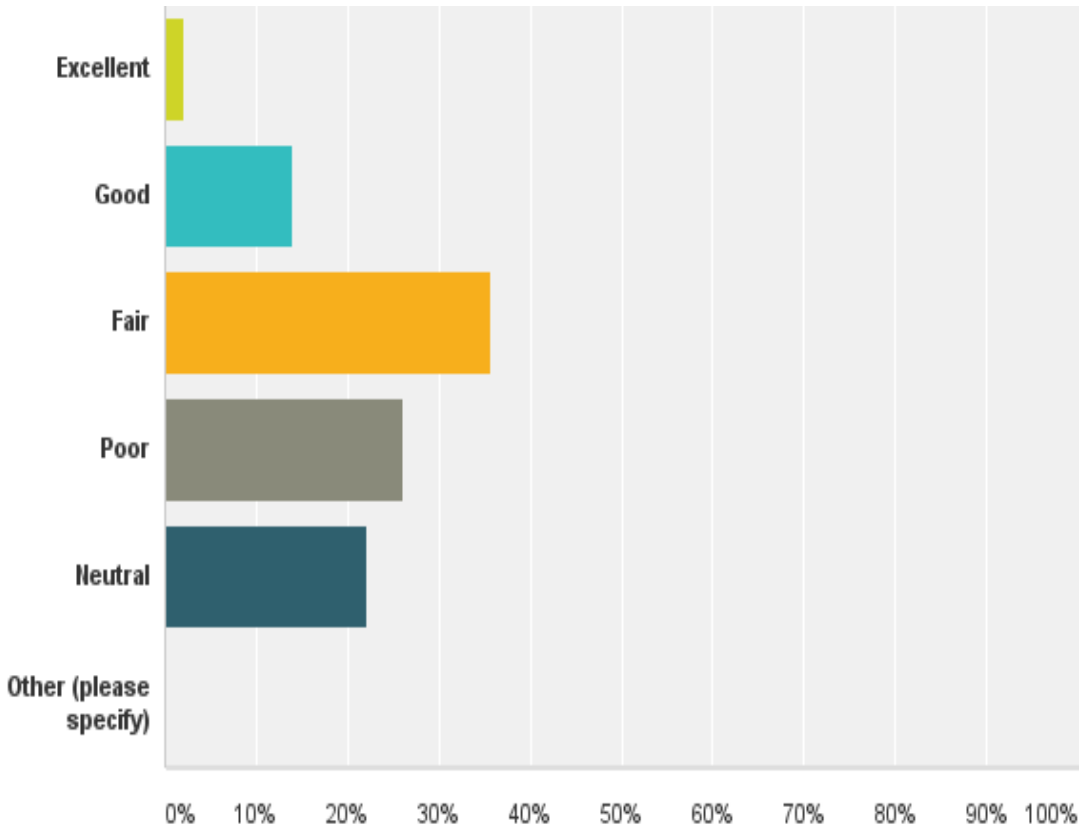
## Q16: How often do you ride a bike on the UNLV campus?

Answered: 807 Skipped: 144

| Answer Choices | Responses | |
|---|---|---|
| Daily | **9.91%** | 80 |
| A few times a week | **9.42%** | 76 |
| A few times a month | **7.93%** | 64 |
| A few times a year | **13.63%** | 110 |
| Never | **59.11%** | 477 |
| **Total** | | **807** |

## Q17: How would you rate the current biking conditions on the UNLV campus?

Answered: 792 Skipped: 159

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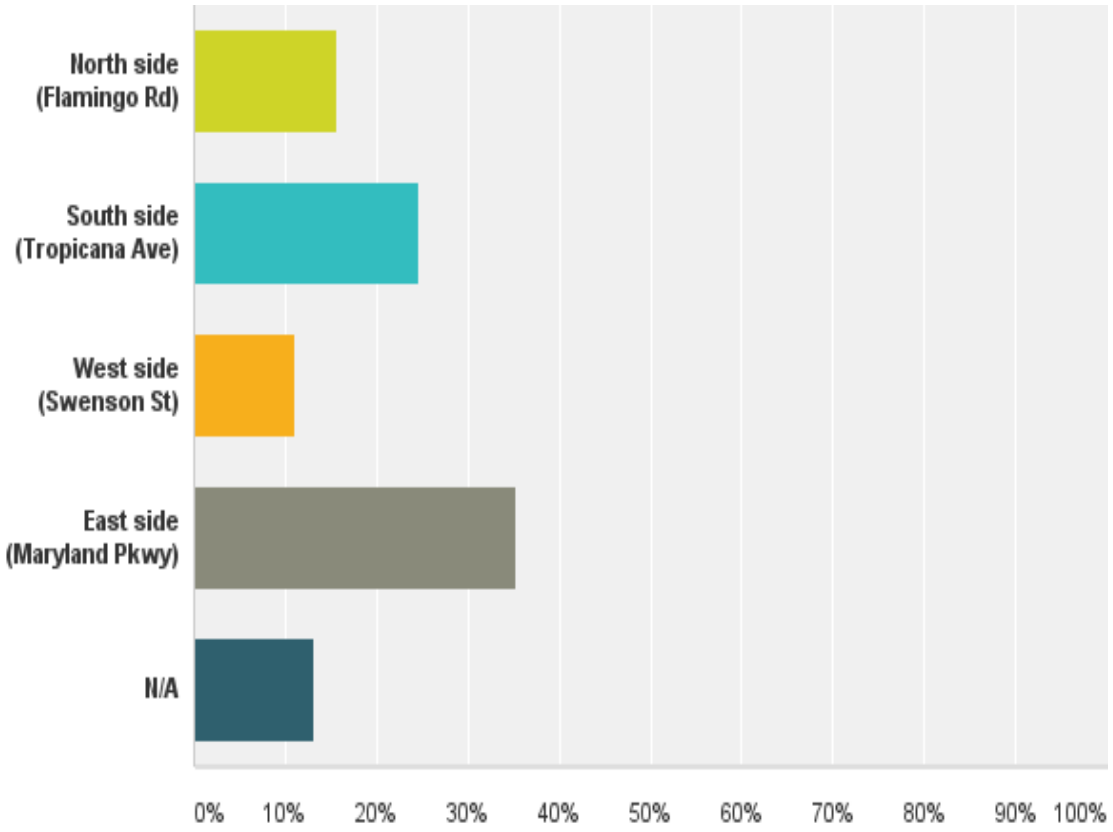
## Q17: How would you rate the current biking conditions on the UNLV campus?

Answered: 792 Skipped: 159

| Answer Choices | Responses | |
|---|---|---|
| Excellent | 2.02% | 16 |
| Good | 13.89% | 110 |
| Fair | 35.73% | 283 |
| Poor | 26.14% | 207 |
| Neutral | 22.22% | 176 |
| Other (please specify) | 0.00% | 0 |
| Total | | 792 |

## Q18: If you were to ride your bike to or from UNLV, from which point would you most likely enter or exit the campus?

Answered: 800 Skipped: 151

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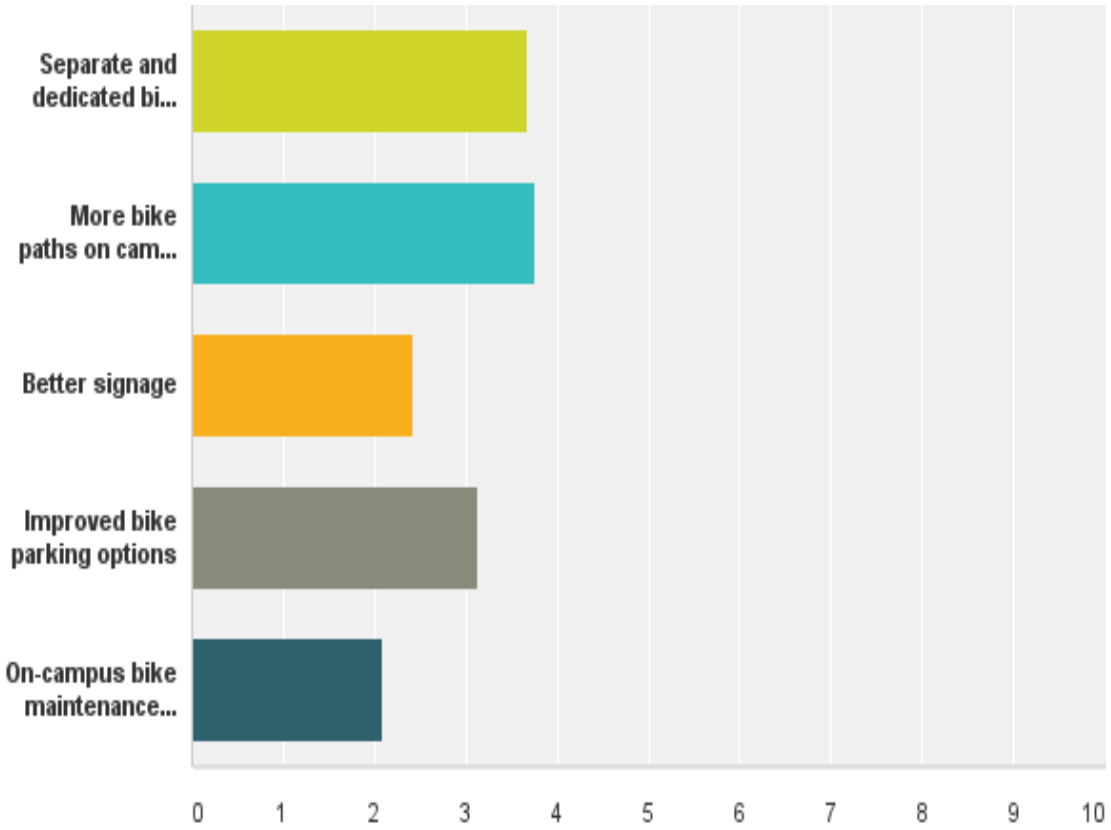
## Q18: If you were to ride your bike to or from UNLV, from which point would you most likely enter or exit the campus?

Answered: 800 Skipped: 151

| Answer Choices | Responses | |
|---|---|---|
| North side (Flamingo Rd) | **15.75%** | 126 |
| South side (Tropicana Ave) | **24.63%** | 197 |
| West side (Swenson St) | **11.13%** | 89 |
| East side (Maryland Pkwy) | **35.38%** | 283 |
| N/A | **13.13%** | 105 |
| **Total** | | **800** |

## Q19: Rank the most effective improvements for enhanced biking conditions on UNLV campus. When using a computer, you may drag and drop these in order of preference.(1 = most effective, 5 = least effective):

Answered: 704 Skipped: 247

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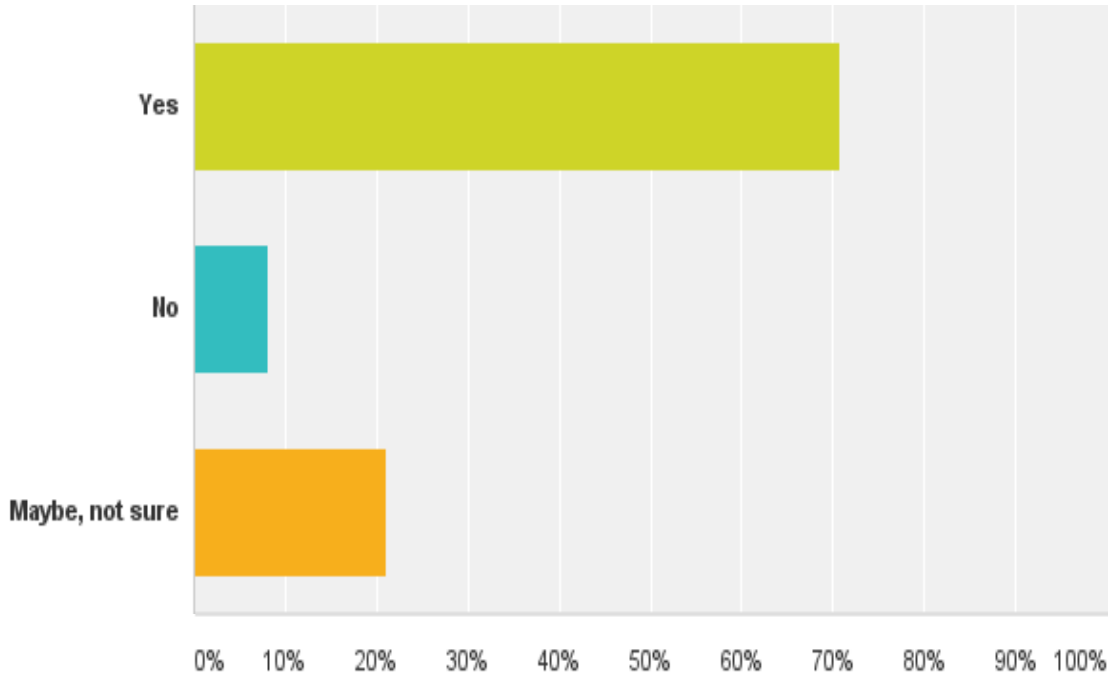
## Q19: Rank the most effective improvements for enhanced biking conditions on UNLV campus. When using a computer, you may drag and drop these in order of preference.(1 = most effective, 5 = least effective):

Answered: 704 Skipped: 247

| | 1 | 2 | 3 | 4 | 5 | Total | Score |
|---|---|---|---|---|---|---|---|
| Separate and dedicated bike paths | **36.04%** 240 | **26.58%** 177 | **16.37%** 109 | **11.56%** 77 | **9.46%** 63 | 666 | 3.68 |
| More bike paths on campus and more connected bike routes | **32.62%** 214 | **33.54%** 220 | **17.38%** 114 | **9.45%** 62 | **7.01%** 46 | 656 | 3.75 |
| Better signage | **7.23%** 48 | **10.69%** 71 | **25.90%** 172 | **29.37%** 195 | **26.81%** 178 | 664 | 2.42 |
| Improved bike parking options | **19.94%** 133 | **18.44%** 123 | **27.89%** 186 | **22.19%** 148 | **11.54%** 77 | 667 | 3.13 |
| On-campus bike maintenance shop | **6.27%** 42 | **10.15%** 68 | **13.13%** 88 | **27.01%** 181 | **43.43%** 291 | 670 | 2.09 |

## Q20: If UNLV provided secure and convenient bike parking on campus (as shown above), would this increase your interest in riding a bike to UNLV?

Answered: 795 Skipped: 156

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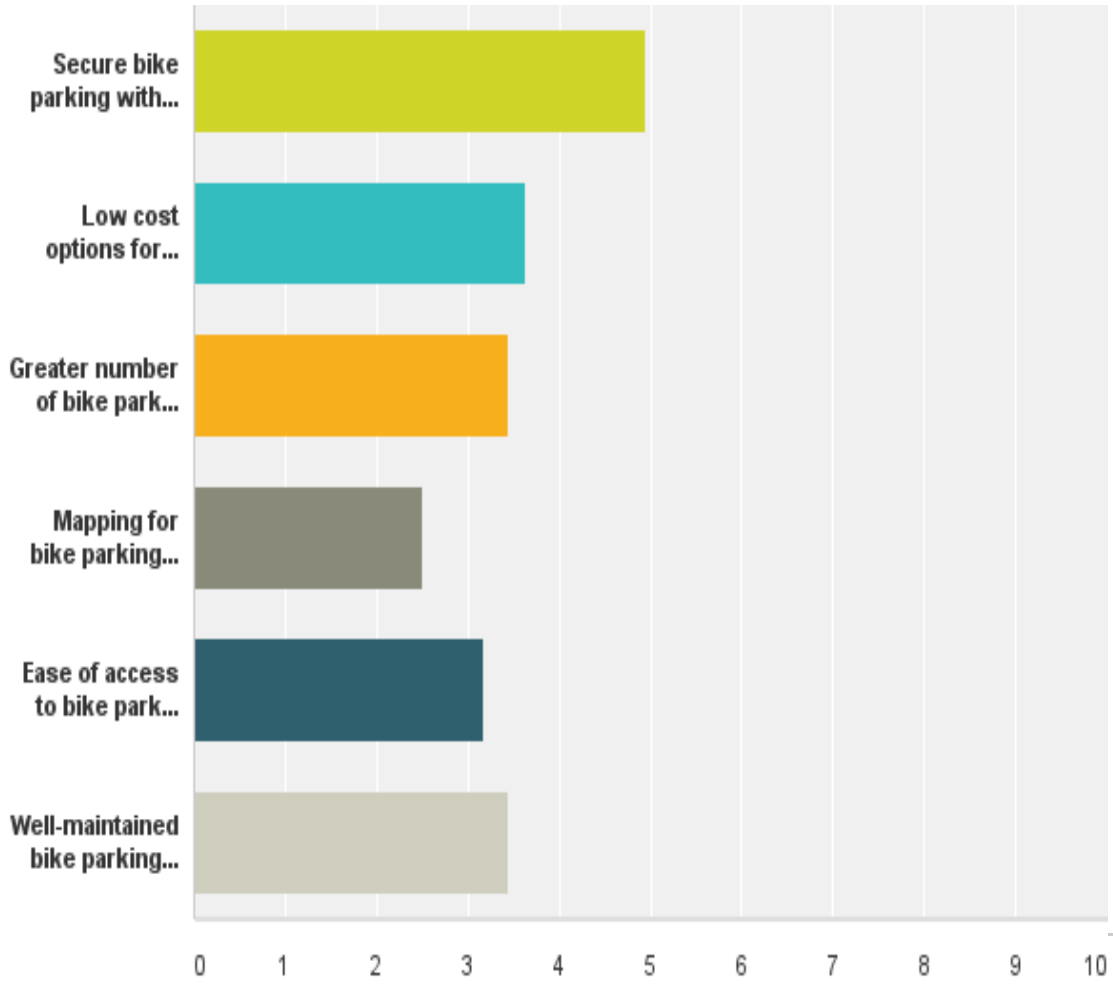
## Q20: If UNLV provided secure and convenient bike parking on campus (as shown above), would this increase your interest in riding a bike to UNLV?

Answered: 795 Skipped: 156

| Answer Choices | Responses | |
|---|---|---|
| Yes | **70.82%** | 563 |
| No | **8.05%** | 64 |
| Maybe, not sure | **21.13%** | 168 |
| **Total** | | **795** |

## Q21: Rank your most important criteria for bike parking on the UNLV campus. When using a computer, you may drag and drop these in order of preference. (1 = most important, 6 = least important):

Answered: 693 Skipped: 258

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## Q21: Rank your most important criteria for bike parking on the UNLV campus. When using a computer, you may drag and drop these in order of preference. (1 = most important, 6 = least important):

Answered: 693 Skipped: 258

| | 1 | 2 | 3 | 4 | 5 | 6 | Total | Score |
|---|---|---|---|---|---|---|---|---|
| Secure bike parking with greater protection from theft, vandalism and weather | **57.58%** 376 | **14.70%** 96 | **9.04%** 59 | **6.58%** 43 | **6.74%** 44 | **5.36%** 35 | 653 | 4.94 |
| Low cost options for bike parking, such as bike racks | **14.09%** 91 | **24.15%** 156 | **17.65%** 114 | **14.55%** 94 | **15.02%** 97 | **14.55%** 94 | 646 | 3.64 |
| Greater number of bike parking locations | **10.49%** 68 | **14.97%** 97 | **23.30%** 151 | **22.99%** 149 | **16.82%** 109 | **11.42%** 74 | 648 | 3.45 |
| Mapping for bike parking availability using internet and mobile app accounts | **5.85%** 38 | **8.92%** 58 | **12.31%** 80 | **12.46%** 81 | **24.62%** 160 | **35.85%** 233 | 650 | 2.51 |
| Ease of access to bike parking with electronic card or keyless access to bike lockers or bike parking areas | **6.48%** 42 | **20.68%** 134 | **16.20%** 105 | **16.82%** 109 | **20.06%** 130 | **19.75%** 128 | 648 | 3.17 |

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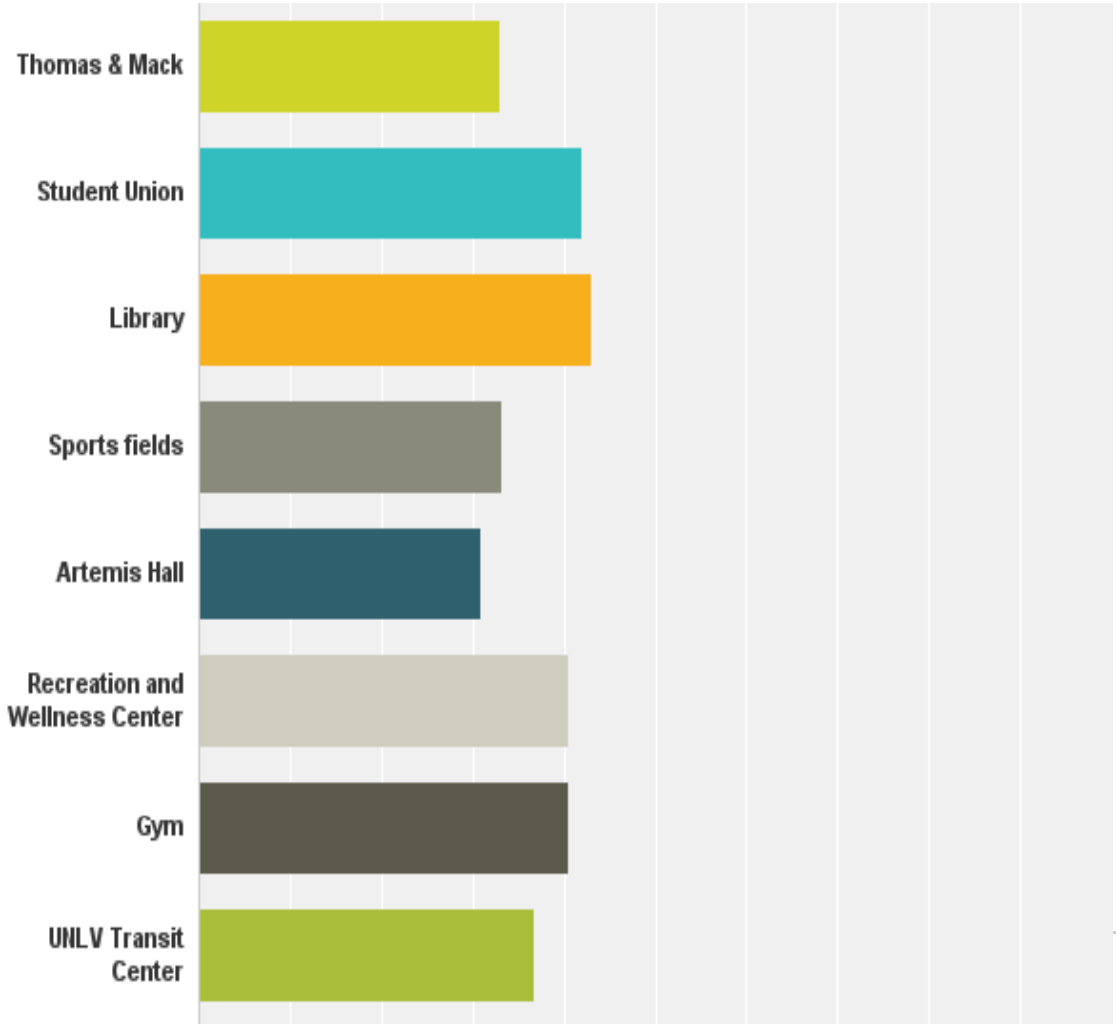
## Q22: Which of the following places on the UNLV campus would you most likely need bike parking?

Answered: 758 Skipped: 193

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## Q22: Which of the following places on the UNLV campus would you most likely need bike parking?

Answered: 758 Skipped: 193

| | Least likely to need bike parking | <<< | Neutral | >>> | Most likely to need bike parking | Total | Weighted Average |
|---|---|---|---|---|---|---|---|
| Thomas & Mack | 10.43% 77 | 9.49% 70 | 39.57% 292 | 20.33% 150 | 20.19% 149 | 738 | 3.30 |
| Student Union | 2.55% 19 | 2.28% 17 | 17.58% 131 | 28.46% 212 | 49.13% 366 | 745 | 4.19 |
| Library | 2.03% 15 | 1.62% 12 | 16.51% 122 | 24.09% 178 | 55.75% 412 | 739 | 4.30 |
| Sports fields | 9.44% 69 | 10.53% 77 | 37.76% 276 | 22.98% 168 | 19.29% 141 | 731 | 3.32 |
| Artemis Hall | 10.06% 73 | 9.64% 70 | 52.89% 384 | 16.12% 117 | 11.29% 82 | 726 | 3.09 |
| Recreation and Wellness Center | 3.10% 23 | 2.96% 22 | 23.15% 172 | 26.11% 194 | 44.68% 332 | 743 | 4.06 |
| Gym | 3.38% 25 | 2.71% 20 | 22.46% 166 | 28.15% 208 | 43.30% 320 | 739 | 4.05 |
| UNLV Transit | 6.26% | 6.80% | 31.43% | 23.81% | 31.70% | | |

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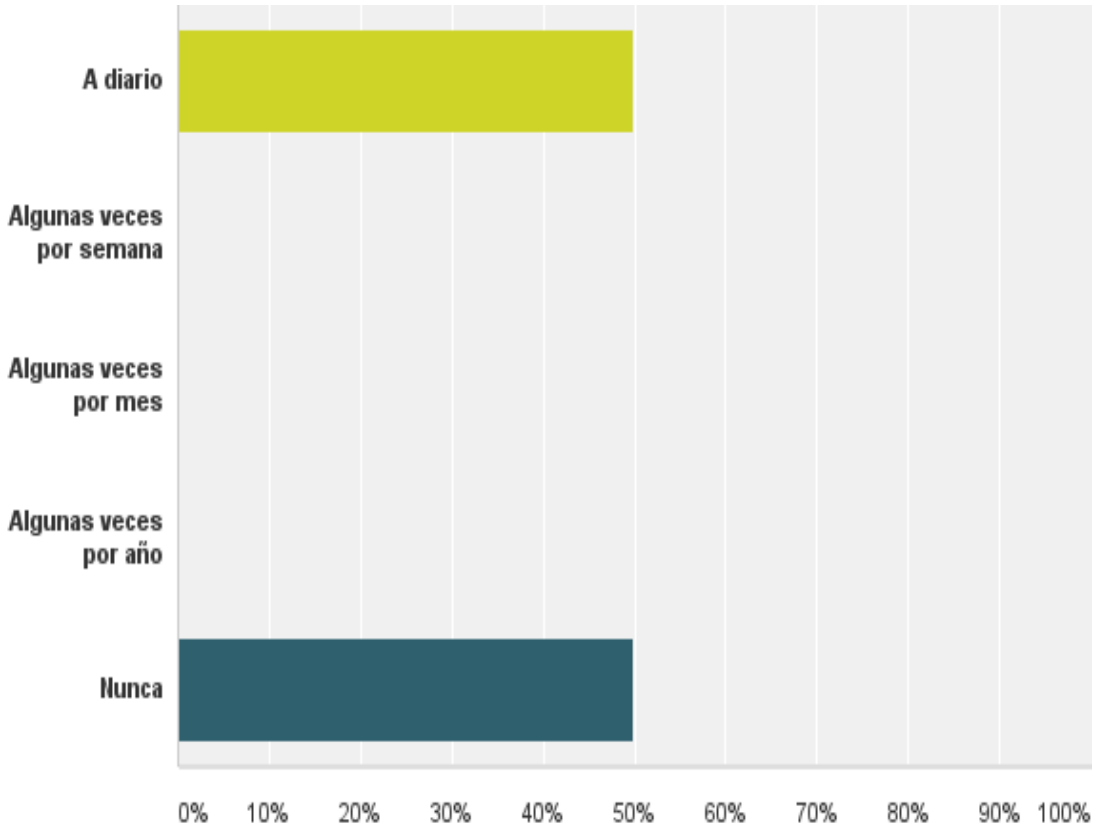
## Q25: ¿Con qué frecuencia anda en bicicleta en el campus de la UNLV?

Answered: 2 Skipped: 949

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## Q25: ¿Con qué frecuencia anda en bicicleta en el campus de la UNLV?

Answered: 2 Skipped: 949

| Answer Choices | Responses | |
|---|---|---|
| A diario | 50.00% | 1 |
| Algunas veces por semana | 0.00% | 0 |
| Algunas veces por mes | 0.00% | 0 |
| Algunas veces por año | 0.00% | 0 |
| Nunca | 50.00% | 1 |
| Total | | 2 |

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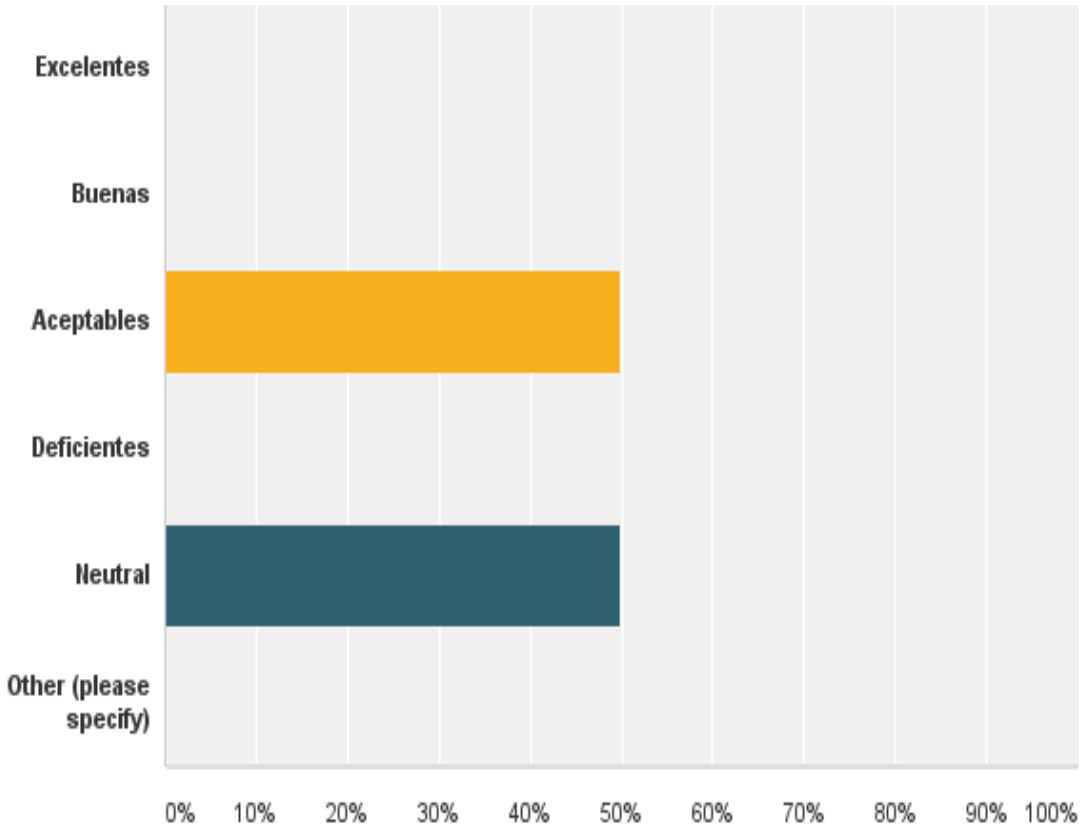
## Q26: ¿Cómo calificaría las condiciones actuales para andar en bicicleta en el campus de la UNLV?

Answered: 2 Skipped: 949

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## Q26: ¿Cómo calificaría las condiciones actuales para andar en bicicleta en el campus de la UNLV?

Answered: 2 Skipped: 949

| Answer Choices | Responses | |
|---|---|---|
| Excelentes | 0.00% | 0 |
| Buenas | 0.00% | 0 |
| Aceptables | 50.00% | 1 |
| Deficientes | 0.00% | 0 |
| Neutral | 50.00% | 1 |
| Other (please specify) | 0.00% | 0 |
| Total | | 2 |

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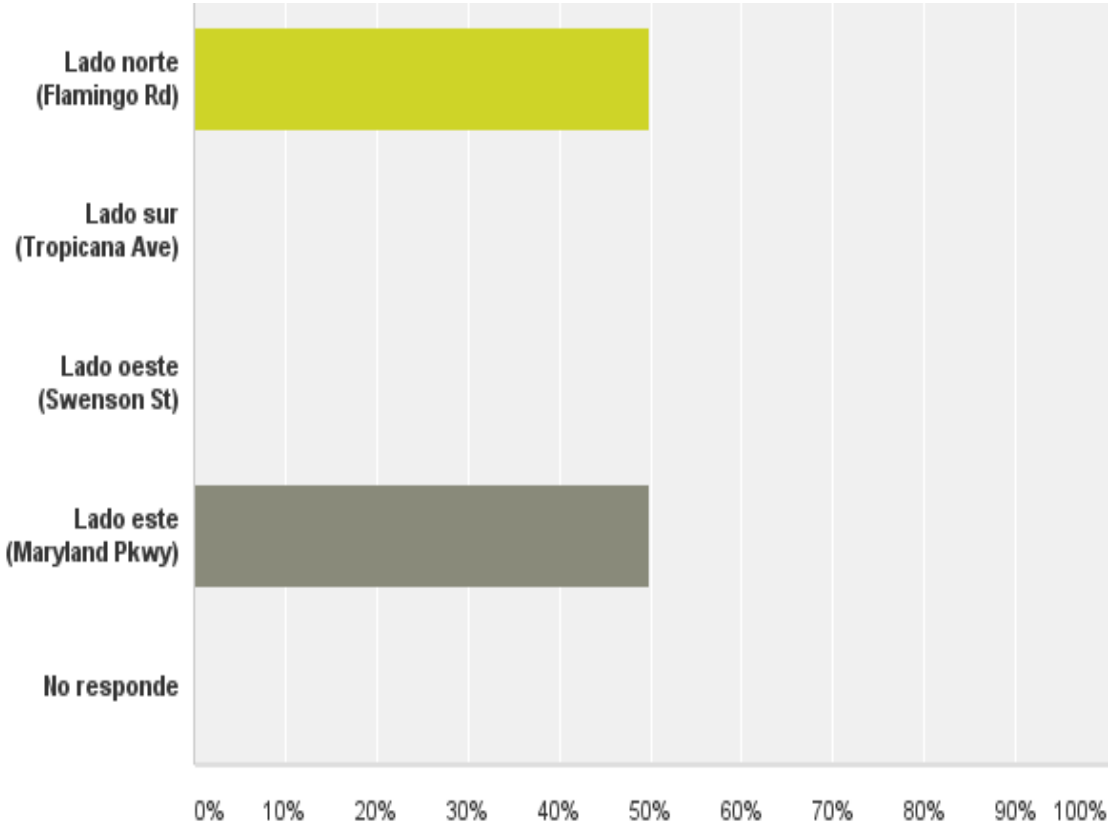
## Q27: Si viajara en bicicleta a la UNLV o desde la UNLV, ¿desde qué punto es más probable que entre o salga del campus?

Answered: 2 Skipped: 949

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## Q27: Si viajara en bicicleta a la UNLV o desde la UNLV, ¿desde qué punto es más probable que entre o salga del campus?

Answered: 2 Skipped: 949

| Answer Choices | Responses | |
|---|---|---|
| Lado norte (Flamingo Rd) | 50.00% | 1 |
| Lado sur (Tropicana Ave) | 0.00% | 0 |
| Lado oeste (Swenson St) | 0.00% | 0 |
| Lado este (Maryland Pkwy) | 50.00% | 1 |
| No responde | 0.00% | 0 |
| Total | | 2 |

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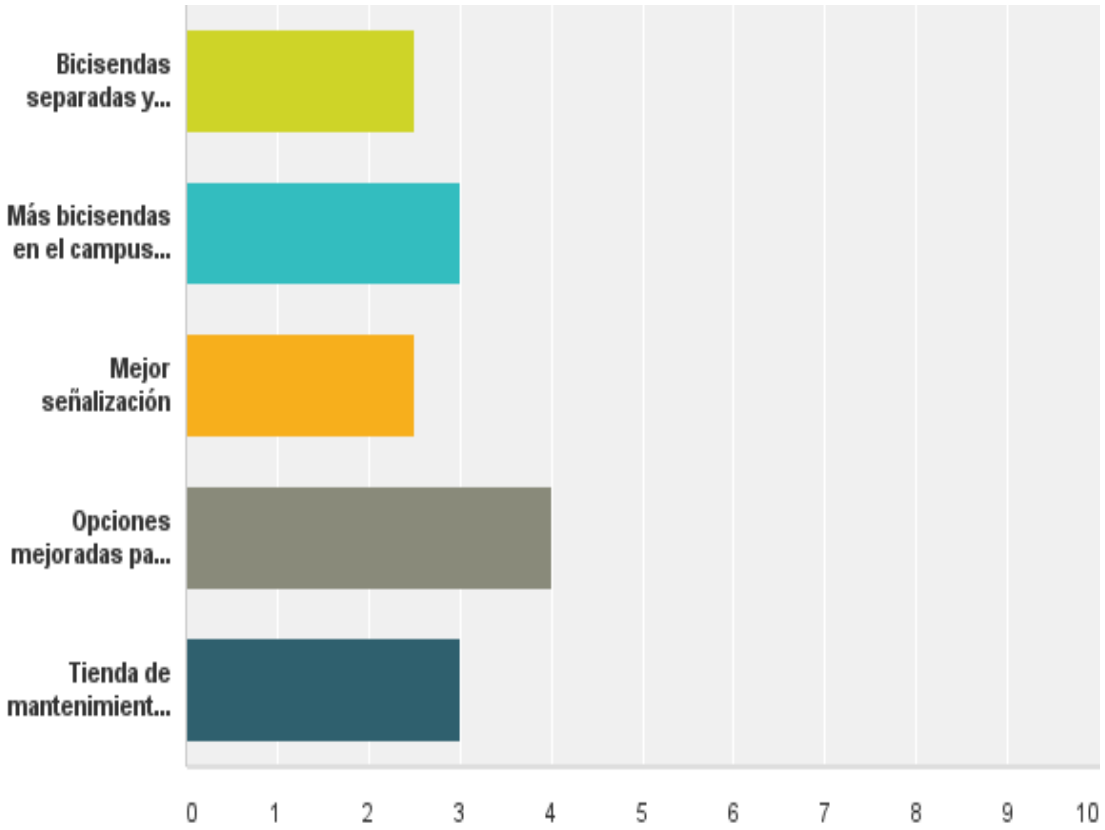
## Q28: Ordene según la efectividad las mejoras para las condiciones para andar en bicicleta en el campus de la UNLV. Al usar una computadora, puede arrastrarlos y soltarlos en el orden de preferencia. (1 = más efectiva, 5 = menos efectiva):

Answered: 2 Skipped: 949




Powered by SurveyMonkey

## Q28: Ordene según la efectividad las mejoras para las condiciones para andar en bicicleta en el campus de la UNLV. Al usar una computadora, puede arrastrarlos y soltarlos en el orden de preferencia. (1 = más efectiva, 5 = menos efectiva):

Answered: 2 Skipped: 949

| | 1 | 2 | 3 | 4 | 5 | Total | Score |
|---|---|---|---|---|---|---|---|
| Bicisendas separadas y exclusivas | 0.00% 0 | 0.00% 0 | 50.00% 1 | 50.00% 1 | 0.00% 0 | 2 | 2.50 |
| Más bicisendas en el campus y más rutas para bicicletas conectadas | 50.00% 1 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 50.00% 1 | 2 | 3.00 |
| Mejor señalización | 0.00% 0 | 0.00% 0 | 50.00% 1 | 50.00% 1 | 0.00% 0 | 2 | 2.50 |
| Opciones mejoradas para el estacionamiento de bicicletas | 0.00% 0 | 100.00% 2 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 2 | 4.00 |
| Tienda de mantenimiento de bicicletas dentro del campus | 50.00% 1 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 50.00% 1 | 2 | 3.00 |

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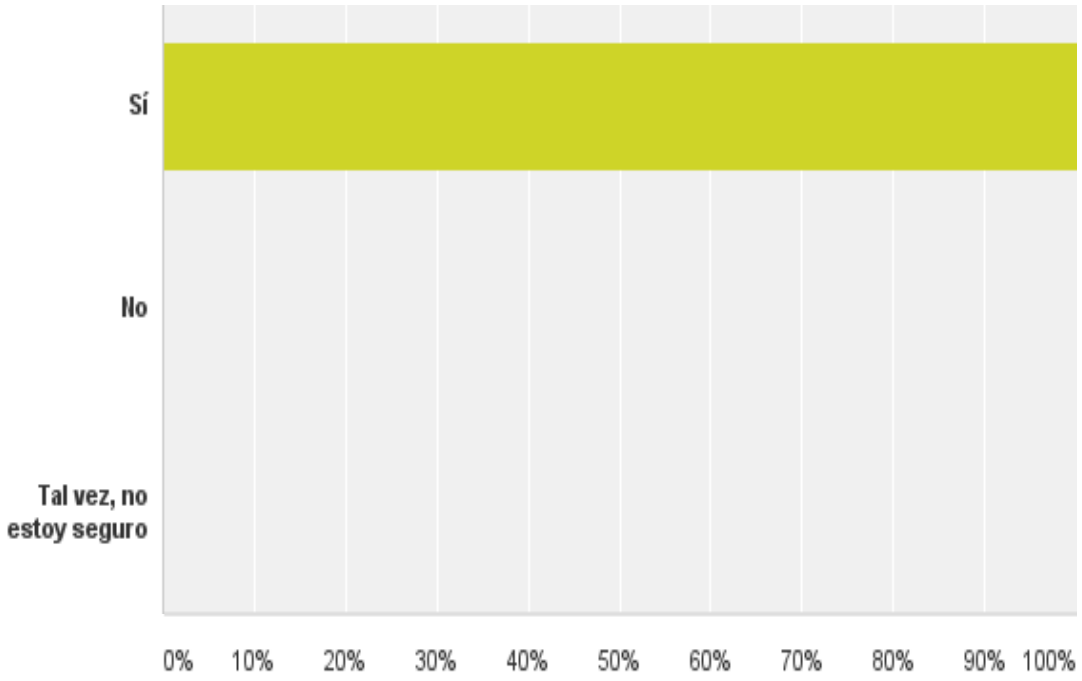
## Q29: Si la UNLV proporcionara un estacionamiento para bicicletas seguro y conveniente en el campus (como se muestra arriba), ¿esto incrementaría su interés en ir en bicicleta a la UNLV?

Answered: 2 Skipped: 949




Powered by SurveyMonkey

## Q29: Si la UNLV proporcionara un estacionamiento para bicicletas seguro y conveniente en el campus (como se muestra arriba), ¿esto incrementaría su interés en ir en bicicleta a la UNLV?

Answered: 2 Skipped: 949

| Answer Choices | Responses | |
|---|---|---|
| Sí | 100.00% | 2 |
| No | 0.00% | 0 |
| Tal vez, no estoy seguro | 0.00% | 0 |
| Total | | 2 |

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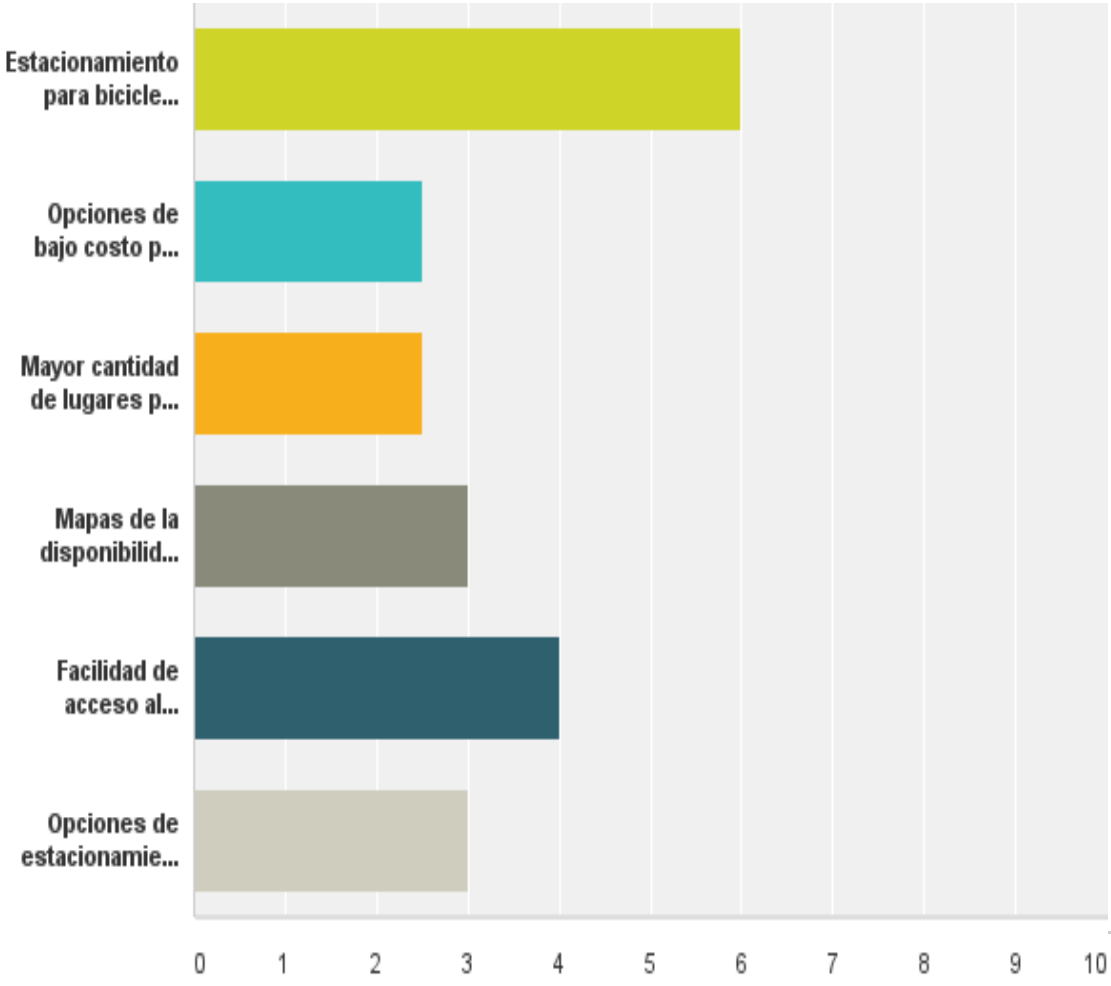
## Q30: Ordene según la importancia los criterios para el estacionamiento de bicicletas en el campus de la UNLV. Al usar una computadora, puede arrastrarlos y soltarlos en el orden de preferencia. (1 = más importante, 6 = menos importante):

Answered: 2 Skipped: 949




Powered by

## Q30: Ordene según la importancia los criterios para el estacionamiento de bicicletas en el campus de la UNLV. Al usar una computadora, puede arrastrarlos y soltarlos en el orden de preferencia. (1 = más importante, 6 = menos importante):

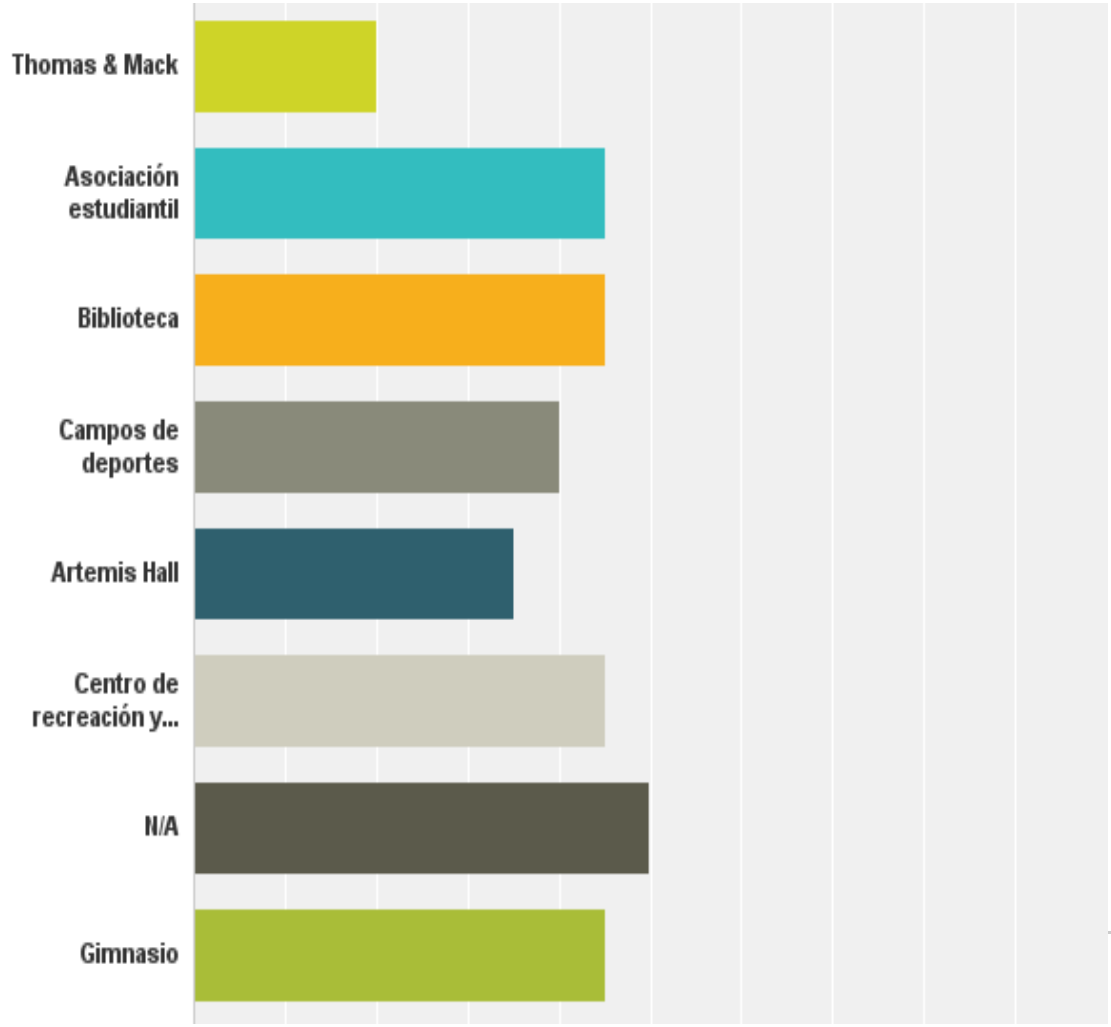
Answered: 2 Skipped: 949

| | 1 | 2 | 3 | 4 | 5 | 6 | Total | Score |
|---|---|---|---|---|---|---|---|---|
| Estacionamiento para bicicletas seguro con mayor protección contra robo, vandalismo y condiciones climáticas | **100.00%** 2 | **0.00%** 0 | **0.00%** 0 | **0.00%** 0 | **0.00%** 0 | **0.00%** 0 | 2 | 6.00 |
| Opciones de bajo costo para estacionar bicicletas, como aparcabicicletas | **0.00%** 0 | **0.00%** 0 | **0.00%** 0 | **50.00%** 1 | **50.00%** 1 | **0.00%** 0 | 2 | 2.50 |
| Mayor cantidad de lugares para estacionar bicicletas | **0.00%** 0 | **0.00%** 0 | **50.00%** 1 | **0.00%** 0 | **0.00%** 0 | **50.00%** 1 | 2 | 2.50 |
| Mapas de la disponibilidad de estacionamientos para bicicletas mediante internet y cuentas de | **0.00%** 0 | **50.00%** 1 | **0.00%** 0 | **0.00%** 0 | **0.00%** 0 | **50.00%** 1 | 2 | 3.00 |

Powered by S

## Q31: ¿En cuáles de los siguientes lugares dentro del campus de la UNLV es más probable que usted necesite estacionamiento para bicicletas?

Answered: 2 Skipped: 949




Powered by

## Q31: ¿En cuáles de los siguientes lugares dentro del campus de la UNLV es más probable que usted necesite estacionamiento para bicicletas?

Answered: 2 Skipped: 949

| | Menos probable que necesite estacionamiento para bicicletas | <<< | Neutral | >>> | Más probable que necesite estacionamiento para bicicletas | Total | Weighted Average |
|---|---|---|---|---|---|---|---|
| Thomas & Mack | 50.00% 1 | 0.00% 0 | 50.00% 1 | 0.00% 0 | 0.00% 0 | 2 | 2.00 |
| Asociación estudiantil | 0.00% 0 | 0.00% 0 | 0.00% 0 | 50.00% 1 | 50.00% 1 | 2 | 4.50 |
| Biblioteca | 0.00% 0 | 0.00% 0 | 0.00% 0 | 50.00% 1 | 50.00% 1 | 2 | 4.50 |
| Campos de deportes | 0.00% 0 | 0.00% 0 | 50.00% 1 | 0.00% 0 | 50.00% 1 | 2 | 4.00 |
| Artemis Hall | 0.00% 0 | 0.00% 0 | 50.00% 1 | 50.00% 1 | 0.00% 0 | 2 | 3.50 |
| Centro de recreación y bienestar | 0.00% 0 | 0.00% 0 | 0.00% 0 | 50.00% 1 | 50.00% 1 | 2 | 4.50 |
| N/A | 0.00% 0 | 0.00% 0 | 0.00% 0 | 0.00% 0 | 100.00% 1 | 1 | 5.00 |
| Gimnasio | 0.00% | 0.00% | 0.00% | 50.00% | 50.00% | | |

Powered by S

# Appendices - General

## 1D Promotional Outreach Materials

## Cathy Halka

**From:** RTC Southern Nevada <nvrtc@public.govdelivery.com>
**Sent:** Monday, June 13, 2016 1:58 PM
**To:** Aileen Magnera; Cathy Halka; Jesse Diaz
**Subject:** Courtesy Copy: Survey Closes Weds., June 15th - Spencer Greenway Trail & UNLV Campus Bike Plan

**This is a courtesy copy of an email bulletin sent by Cathy Halka.**

**This bulletin was sent to the following groups of people:**

Subscribers of Spencer Greenway Trail and UNLV Campus Bike Plan (358 recipients)

---

SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

**June 13, 2016**

---

# Online Survey Closes Weds. June 15th

We want your feedback!

Please take the online survey to tell us more about your ideas for the Spencer Greenway Trail and UNLV Campus Bike Plan.

**CLICK HERE TO TAKE THE SURVEY (EN/SP)**

As a thank you, all survey respondents will receive a coupon for **20% off at REI**.

Survey closes Weds., June 15th. Share the survey link on Facebook and email the link to three of your friends.

---

# May Community Open Houses

Thank you to all who joined us last month at the community open houses to learn more about the project and provide input on the study.

Here are some highlights:

**UNLV Student Union - May 4th**

The project team reached nearly 100 students, faculty, and staff at the UNLV Student Union and received great feedback on the UNLV Campus Bike Plan.

**The Boulevard Mall - May 23rd**

The project team set up displays in the center of The Boulevard Mall and received over 40 survey responses at the event. Attendees showed overwhelming support for the Spencer Greenway Trail and provided detailed feedback on desired trail elements.

## About the Project

The Spencer Greenway Trail and UNLV Campus Bike Plan is a year-long project to develop conceptual plans for a trail along the NV Energy-owned "Spencer Utility Corridor" and identify a bicycle network on the UNLV Main Campus. Click here to find out more.

## Related Projects

- **Regional Bicycle and Pedestrian Plan** - The RTC, with support from the Southern Nevada Health District (SNHD), is developing a plan for a bicycle network and programs for Southern Nevada. Click here to find out more.

For more information about the Spencer Greenway Trail and UNLV Campus Bike Plan, please visit the online project page or contact us at halkac@rtcsnv.com

You can view or update your subscriptions, password or email address at any time on your User Profile Page. All you will need are your email address and your password.

You can always use the "Reset your Password" link on the Log-In page for help.

This service is provided to you at no charge by Regional Transportation Commission.

Visit us on the web at http://www.rtcsnv.com.

# SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

## SPENCER GREENWAY TRAIL

The Regional Transportation Commission is conducting a study to determine the level of community support and the desired design elements for a "Spencer Greenway" paved path connecting UNLV and Downtown Las Vegas. The proposed path would be primarily constructed along a 100-foot wide existing utility corridor that runs adjacent to Spencer Street. Some segments of the path would have connections along surface streets as well.

## UNLV CAMPUS BIKE PLAN

The Regional Transportation Commission is conducting a study to determine the level of community support and the desired design elements for a bike system plan at the UNLV main campus on Maryland Parkway. The study is evaluating bicycle connectivity as well as associated amenities like bike parking.

## PROJECT SCHEDULE

| FEBRUARY 2016 | | APRIL 2016 | AUGUST 2016 | | NOVEMBER 2016 | JANUARY 2017 |
|---|---|---|---|---|---|---|
| Project Kick Off | Review Existing Studies | Public Outreach Survey | Conceptual Designs | Draft Plan | Public Outreach | Final Plan |

***Questions?***

*Please visit: rtcsnv.com or contact Monika Bertaki:*
*(702) 676-1749 or bertakim@rtcsnv.com*

## TAKE THE ONLINE SURVEY

**www.surveymonkey.com/r/spencerUNLV**

Receive a 20% off REI coupon
When you take the online survey

## ATTEND AN UPCOMING OPEN HOUSE

Monday, May 23, 2016 4pm-7pm
Boulevard Mall (in front of J.C. Penney)
3528 S. Maryland Pkwy, Las Vegas, NV 89169

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RTC

# CAMINO SPENCER GREENWAY Y PLAN DE BICICLETA PARA EL CAMPUS DE UNLV

## CAMINO SPENCER GREENWAY

La Comisión Regional de Transporte está llevando a cabo un estudio para determinar el nivel de apoyo de la comunidad y los elementos de diseño deseados para "Spencer Greenway" una ruta pavimentada que conecta la Universidad de Las Vegas y el Centro de Las Vegas. El propuesto camino se construyera principalmente a lo largo de un amplio pasillo existente de 100 pies que corre junto a Spencer Street. También, algunos segmentos de la ruta tendrían conexiones a lo largo de otras calles.

## PLAN DE BICICLETA PARA EL CAMPUS DE UNLV

La Comisión Regional de Transporte está llevando a cabo un estudio para determinar el nivel de apoyo de la comunidad y los elementos de diseño deseados para un plan de sistema de bicicletas en el campus principal de UNLV en Maryland Parkway. El estudio está evaluando la conectividad de la bicicleta, así como servicios asociados como el estacionamiento de bicicletas.

## CALENDARIO DEL PROYECTO

| FEBRERO 2016 | | ABRIL 2016 | AGOSTO 2016 | | NOVIEMBRE 2016 | ENERO 2017 |
|---|---|---|---|---|---|---|
| Inicio del Proyecto | Revisar Estudios Existentes | Encuesta y Alcance Público | Diseño Conceptual | Proyecto de Plan | Alcance Público | Plan Final |

***Preguntas?***

*Visite: rtcsnv.com o póngase en contacto con*
*Monika Bertaki: (702) 676-1749 o bertakim@rtcsnv.com*

## TOME LA ENCUESTA EN LÍNEA

**www.surveymonkey.com/r/spencerUNLV**

Reciba un cupón de descuento de 20% de REI cuando termine la encuesta en línea

REI

## ASSISTIR A UNA REUNIÓN

Lunes, Mayo 23, 2016 4pm-7pm
Boulevard Mall (en frente de J.C. Penney)
3528 S. Maryland Pkwy, Las Vegas, NV 89169

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RTC

# SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

## PROJECT OVERVIEW MAP

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BONNEVILLE AVE
584 (P)
39 (B)
EAST FREMONT NEIGHBORHOOD
15TH STREET (BIKE ROUTE)
LEWIS STREET NEIGHBORHOOD
CONNECTION TO DOWNTOWN (TBD)
CHARLESTON BLVD
206
1098 (P)
64 (B)
296 (P)
26 (B)
POTENTIAL SHOPPING CENTER ACCESS
JOHN S. PARK ELEMENTARY SCHOOL
HUNTRIDGE PARK NEIGHBORHOOD
HILLSIDE HEIGHTS NEIGHBORHOOD
CRESTWOOD ELEMENTARY SCHOOL
FREMONT ST
EXPLORE TRAIL CONNECTION THROUGH PARKING LOT
CRESTWOOD NEIGHBORHOOD
JOHN S. PARK NEIGHBORHOOD
MP
OAKEY BLVD
BOULDER HWY (BIKE LANE)
FRANCISCO PARK NEIGHBORHOOD
ST LOUIS AVE (BIKE LANE)
ST LOUIS AVE
SPENCER STREET (60' ROAD): ROUTE TRAIL ALONG EXISTING ROADWAY
BEVERLY GREEN NEIGHBORHOOD
FREMONT MIDDLE SCHOOL
CHRIST EPISCOPAL CHURCH
SOUTH RIDGE NEIGHBORHOOD
NV ENERGY SUBSTATION
SAHARA (BIKE LANE)
SAHARA AVE
SX
716 (P)
74 (B)
CONSIDER PED REFUGE ISLAND WITH TRAFFIC CONTROL
WINCHESTER NEIGHBORHOOD
EXISTING PED ACCESS OUTSIDE UTILITY CORRIDOR
KAREN (BIKE ROUTE)
ROBERT E. LAKE ELEMENTARY SCHOOL
PARKING EASEMENT IN UTILITY CORRIDOR: EXPLORE TRAIL CONNECTION
LAS VEGAS COUNTRY CLUB
113 (P)
9 (B)
VALLEY HIGH SCHOOL
VEGAS VALLEY DRIVE
JOE W. BROWN (BIKE LANE)
EXPLORE EAST-WEST ACCESS TO SCHOOL ALONG FLOOD CONTROL
EXPLORE TRAIL ON EAST SIDE OF CHURCH DRIVEWAY, SLOPE MAY LIMIT ADA ACCESS, LINE OF SIGHT MAY REQUIRE WARNING SIGNS
LDS CHURCH
SUNRISE HOSPITAL
EXPLORE 10'-15' TRAIL OPTION ALONG PAWNEE DRIVE, AVOIDS SUBSTATION
CONSIDER PED REFUGE ISLAND WITH TRAFFIC CONTROL
DESERT INN RD
203
223 (P)
33 (B)
SUBSTATION
THOMAS ELEMENTARY SCHOOL
OPPORTUNITY FOR "PARKWAY" DESIGN FROM SENECA TO TWAIN: INCLUDING PAVERS OR ENHANCED CROSSING TREATMENTS
BOULEVARD MALL
LAS VEGAS NATIONAL GOLF COURSE
243 (P)
33 (B)
POTENTIAL CONNECTION ALONG TWAIN TO BOULEVARD MALL (FUTURE TRANSIT HUB)
PARADISE PALMS NEIGHBORHOOD
LA CUESTE NEIGBORHOOD
TWAIN AVE
203
ORR MIDDLE SCHOOL
KATIE (BIKE LANE)
CONNECTION TO UNLV (TBD)
POTENTIAL CONNECT ALONG KATIE AVE OR TRAIL ALONG FLAMINGO WASH TO UNLV
VIKING RD
POTENTIAL CONNECTION TO SPENCER BIKE LANE
WATKINS GLEN NEIGHBORHOOD
FLAMINGO WASH
WINCHESTER NEIGHBORHOOD
275 (P)
81 (B)
FLAMINGO RD
FLAMINGO (BIKE LANE) NEW
202
449 (P)
68 (B)
1076 (P)
74 (B)
CLARK COUNTY LIBRARY
UNIVERSITY PARK APARTMENTS
PARADISE NEIGHBORHOOD
146 (P)
83 (B)
HARMON AVE
UNLV
HARMON (BIKE LANE)
UNLV EXPANSIONS
198 (P)
37 (B)
370 (P)
21 (B)
PARADISE RD
SWENSON ST
363 (P)
45 (B)
MARYLAND PKWY
MIDTOWN UNLV
SPENCER (BIKE LANE)
SPENCER ST
EASTERN AVE
UNLV TRANSIT CENTER
506 (P)
81 (B)
MCLEOD DR
PECOS RD
TROPICANA AVE
201
163 (P)
42 (B)
WILBER (BIKE LANE)

**Legend**

- Daily Ped Counts (P)
- Daily Bike Counts (B)
- RTC Transit Routes (xxx)
- Bicycle Facilities
- Spencer Greenway Trail (proposed)
- Potential Trailhead
- Phase 1 Recommendations

1 in = 600 ft

N

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# SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

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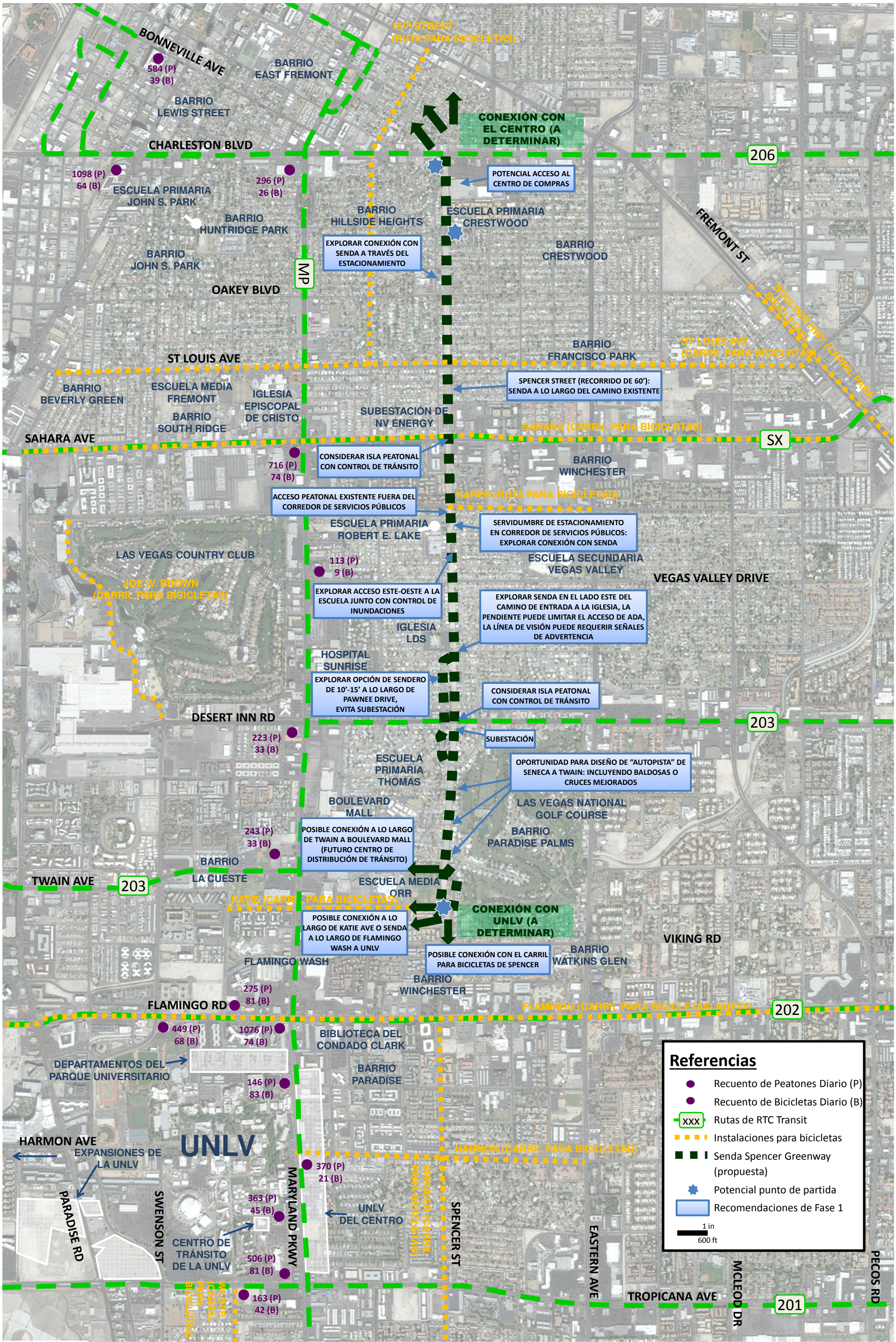
## MAPA GENERAL DEL PROYECTO



# SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

The Regional Transportation Commission (RTC) is developing a plan to better connect the University of Nevada, Las Vegas (UNLV) and downtown Las Vegas. The plan will identify concepts for walking and biking trails on the existing utility corridor along Spencer Street and bike routes as well as amenities on the UNLV Campus.

## Participate in the plan. We want to hear from YOU!

**ATTEND A COMMUNITY OPEN HOUSE**

Stop by to share your ideas with the project team and learn more about the plan.

**Tuesday, November 1, 2016**
**4 p.m. – 7 p.m.**
**The Boulevard Mall, in front of JC Penney**
3528 S. Maryland Parkway
Las Vegas, Nevada 89169

**Thursday, November 3, 2016**
**11 a.m. – 2 p.m.**
**UNLV Main Campus - Student Union**
4505 S. Maryland Parkway
Las Vegas, Nevada 89154

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**Questions?**
Please visit: www.rtcsnv.com/SpencerUNLV
Or contact Monika Bertaki:
(702) 676-1749 bertakim@rtcsnv.com

# SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

La Comisión de Transporte Regional (RTC) está desarrollando un plan para mejorar la conexión de la Universidad de Nevada, Las Vegas (UNLV) y el centro de Las Vegas. El plan identificará conceptos para caminar y andar en bicicleta en el pasillo de servicio existente a lo largo de la calle Spencer y rutas en bicicleta así como instalaciones en el campus de UNLV.

## Participa en el plan.

**Assista a un evento de la communidad.**

Comparta sus ideas con el equipo del proyecto y aprenda más sobre el plan

**Martes, Noviembre 1, 2016**
**4 p.m. – 7 p.m.**
**The Boulevard Mall**
*cerca de JC Penney*
3528 S. Maryland Parkway
Las Vegas, Nevada 89169

**Jueves, Noviembre 3, 2016**
**11 a.m. – 2 p.m.**
**UNLV Main Campus**
**Student Union**
4505 S. Maryland Parkway
Las Vegas, Nevada 89154

SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

# Appendices - Spencer Trail

## 2A Community Meetings Summaries

# Crestwood Elementary Meeting

| 04.04.16 | 7:30 a.m. | Crestwood Elementary School |
|---|---|---|

| | |
|---|---|
| **Meeting called** | RTC |
| **Facilitator** | J.P. Woyton |
| **Note taker** | Ron Maurizi, reviewed by J.P. Woyton |
| **Attendees** | CCSD:<br>Jackie Richardson (Principal)<br><br>RTC:<br>Cathy Halka<br><br>PARSONS:<br>J.P. Woyton<br>Ron Maurizi |

Meeting Summary (next page)

**Meeting minutes are considered final and agreed upon if no comments are received after one week of distribution**

A summary of meeting discussions.

JP and Cathy gave a brief summary of the project.

- Discussed the RTC Spencer Greenway study and wishing to coordinate with Crestwood School.

Jackie said that her biggest concern was possibly losing parking spaces in the parking lot in the NV utility corridor due to the proposed bicycle trail.

- The parking lot is for staff members and parents.
- It is at capacity most of the time.

Jackie noted:

- Crestwood has 723 students.
- Most of these students walk to school.
- About 65-75 are on one general ed. bus, plus additional buses for special ed. students.
- Some might bicycle but that is not the majority of students.
- Most of them walk with their parents to school.
- The gates along the NV Energy easement to the school are for trash access and maintenance vehicles/deliveries if necessary, but not for students.
- Access on the east side of the school is most active for entry and exit.

Jackie's biggest concerns with a bicycle trail adjacent to the school:

- Safety of students.
- Homeless population
- General homeless issues with sleeping in the front utility easement and trying to use restrooms in the school at times.
- That the trail is utilized and safe to the public.

Ron discussed the possible trail alignment through the parking area:

- Ron discussed a possible trail alignment along the east side of the lot. He mentioned there were approximately 78 parking spaces.
- Jackie said using the west side of the lot would be less intrusive since the east side is where most of the traffic patterns into the school occur. Placing the trail along the west side would keep the trail traffic from conflicting with school traffic patterns.

Ron mentioned the cross walk on Wengert Ave. and asked about the general patterns of kids at open and close of school

- Jackie said the school lets kids out on the east side only. Then they walk around the school to Wengert. Busy sidewalk on Wengert. Buses load and unload on the north side of Wengert. The cross walk mid-block is somewhat utilized even though it is not ADA compliant.
- Ron suggested possibly moving the mid-block crosswalk to the west and aligning it with the trail crossing on Wegert. In that case, Jackie said the bus stop would also move to

work with that new location. Currently, special ed. buses drop off/pick up west of the crosswalk, and the one general ed. bus drop off/pick up east of the crosswalk.

JP mentioned that this parking lot area could be considered as a trailhead location. He asked if the school ever considered extending parking to the north of its current location, acquiring more easement area from NV Energy.

- Jackie said her only concern with a trailhead was the homeless settling in there.
- She also said she was not sure if additional parking was ever considered.

Ron asked if the children would use the trail

- Jackie said that was a good question for the parents. She was not sure.
- The PTA president is an LV Metro police officer and could be a good contact for feedback.

JP asked about the parking lot and school drainage patterns.

- Jackie said during an intense storm event the site does flood. She said four years ago a fairly intense storm came through and flooded most of the classrooms. It can be a real problem depending on the storm intensity.
- The parking lot has been there over 20 years. Jackie has been at this school for four years.
- Lighting was put in by the CCSD for the parking lot.

Jackie provided further comments:

- Questions on the easements should be directed to CCSD Facilities (Tracy Murphy).
- CCSD admin would have more information on school polices if we have questions.

Ron mentioned the possibility of adding more parking to the east lot to compensate for the loss or parking along the west side with the bicycle path.

- Jackie said the east lot was used by faculty and parents. It was also where the students traveled through when they left classes for the day so that area gets a little busy hence the open area in the middle of the parking lot. The sidewalk along the south side of the school is very busy during beginning and end of day with students.

Ron asked what amenities the school would like to see with a new trail

- Jackie said if they could tie science to the trail, some type of outdoor learning (nature collection, observation with journals) that would be beneficial to the students.
- Jackie feels there are not enough areas for the children to play. Kids hop the fence on evenings and weekends to play basketball, skate, etc. JP mentioned tying the proposed trailhead to the existing school playground along the west side of the school. Jackie thought this might bring the homeless people into the school play areas. It would have to be handled somehow.

- Jackie mentioned there were a lot of skateboarders at the school. Something to consider.

JP mentioned bicycle storage facilities.

- Jackie thought that would be very helpful to the students that do ride their bicycles, but that was not a majority of the students.

Jackie noted that the neighborhood tends to back off on the homeless issue for some reason. Parents' support on controlling it is limited. For example, parents would avoid a route if homeless are there and not expect the city or any agency to address the issue.

Jackie noted parent involvement in the study would be great and is most important with the discussions we are having today.

JP requested help distributing information via utilization of Jackie's email distribution list to parents. Jackie said she would help the study team to distribute information.

Cathy said the RTC was launching a survey this month on the project and also setting up a community meeting later in the spring. Jackie said she would help us get the word out about the survey and public meetings.

# Lake Elementary Meeting

| 04.07.16 | 2:00 p.m. | Lake Elementary School |
|---|---|---|

| | |
|---|---|
| **Meeting called** | RTC |
| **Facilitator** | J.P. Woyton |
| **Note taker** | Ron Maurizi, reviewed by J.P. Woyton |
| **Attendees** | CCSD:<br>Larry McHargue (Principal)<br><br>RTC:<br>Cathy Halka<br><br>PARSONS:<br>J.P. Woyton<br>Ron Maurizi |

Meeting Summary (next page)

## Spencer Greenway Trail and UNLV Bike Plan

### *Lake Elementary School Meeting*

Cathy provided an overview of project with includes the Spencer Greenway Trail and a UNLV Campus Bike Plan study. Today we will be just discussing the Spencer Greenway. Principal McHargue started by giving his concerns with the school and the trail:

- High school kids are in the Greenway usually not for a good reason.
- He would like it if we could fence both sides of the trail.
- Homeless start fires in the Greenway.
- The drainage swale is a walk thru/ cut thru to the parking lot which he is not happy about.
- He's been principal at Lake for 15 years.
- He would like access management to keep people away from school.
- The three (3) parking lots for the school are at capacity all year.

JP said the goal with this project is to enhance and mitigate issues the school has with the Greenway. Some information about the school was obtained via questions from Ron:

- There are 850 students at all times on a full year schedule with five (5) tracks. No summer breaks.
- No buses. Special ed kids get picked-up/dropped-off at Del Mar.
- The three (3) parking lots are for faculty and no public parking is allowed.
- He would consider releasing the kids to the trail versus Del Mar which would give him extra room at the north end of campus.
- Approximately ten (10) kids bicycle to school. They have a safe, fenced in area to put their bicycles.
- If the trail was along the east side of the Greenway he would consider expanding the current parking lot for more capacity. This would work well with the future 2-story classroom structure which is in a feasibility study at this time. Currently the children are in mobile units.
- There are no flooding issues.
- They have learning gardens for the kids.
- Principal McHargue would like a 2-way fence. He doesn't want to provide a place for people to stare at the children from the trail.
- Added security would be helpful if possible.
- Parking lots closed but people climb over the fences and access the school.
- From Principal McHargue's perspective it would be fine to move the parking lot west and put the trail on the east side. He has no history on the parking lot or why it was placed the way it was.

JP asked about a distribution list to parents:

- Principal McHargue said Dr. Barton at the CCSD Instruction Unit can help facilitate communication with respect to this. Dr. Barton is assistant superintendant.

Principal McHargue discussed using the trail near the school for recreational activities:

- A miniature golf site.
- The parking lot is 5 years old
- He would like lighting at the basketball area on the north side of the school.
- If that were to happen then lights would be out at 10 pm.
- There was a shooting at that parking lot in years past.

Cathy discussed the next steps in the process:

- We are developing design concepts as we move forward with the study.
- We have a stakeholder's advisory committee (SAC). Our next meeting is on Monday, April 11th. We have guests coming from law enforcement.
- We will look for public feedback with two (2) public meetings early on in the study – one at UNLV and one in the Greenway neighborhood area.
- We are looking at meeting locations and considering the LDS Church along the Greenway as well as Valley High School.

# Griffith Church Meeting

| | | |
|---|---|---|
| 05.05.16 | | Griffith Church |

| | |
|---|---|
| **Meeting called** | RTC |
| **Facilitator** | Cathy Halka / J.P. Woyton |
| **Note taker** | J.P. Woyton |
| **Attendees** | Griffith:<br>Lorne, Owner<br>Yudylen Roman<br>Gary Carlson, Architect<br><br>RTC:<br>Cathy Halka<br><br>PARSONS:<br>J.P. Woyton |

Meeting Summary (next page)

**Meeting minutes are considered final and agreed upon if no comments are received after one week of distribution**

A summary of meeting discussions.

JP and Cathy gave a brief summary of the project.

- Discussed the RTC Spencer Greenway study and wishing to coordinate with the Griffith Community.

Yudylen explained that NVE owns the land where there parking lot is located. The owner stated that 50-60 years ago, they had a handshake agreement that NVE would provide the lot to Griffith, however NVE will not issue a proprietary letter. They continue to coordinate with NVE to try and work something out.

They would like to rezone the property to be reused as an extension of the nearby school. Right now they are renting the property for non-profit community events until the school across the street is ready to expand.

There are challenges with the school drop off and pick up. Cathy summarized the school walking audit performed.

Lorne would like to be involved in the design development. He envisions many things for the corridor such as community jogging, a teaching trail, naturally growing themes, Star Trek Next Generation theme. He stated that Connie, a tenant across the street writes charters. There may be money for a greenhouse, theme of “growing in the city”. He cited Wren Park as an example. Also a privately owner dog park. Sculpture garden.

Kids grew up here and there’s lots of heart in the community.

He has concern with gentrification, competing with downtown Las Vegas.

They are very supportive of the trail coming through the utility corridor and through their parking lot. They are open to alignment options on either side of the lot.

# Homeless Services Outreach

| 06.06.16 | | |
|---|---|---|
| **Meeting called** | RTC | |
| **Facilitator** | Cathy Halka | |
| **Note taker** | Cathy Halka | |
| **Attendees** | Merideth Spriggs – Caridad<br>Kim Gahagan – Health Plan of Nevada (HPN)<br>Tim, Megan Wheeler – Catholic Charities<br>Ernest Smith – Salvation Army<br>Lewis – HELP of Southern Nevada<br>Jocelyn – City of Las Vegas<br>Catherine Huong – Clark County Social Services<br>Cathy Halka – RTC<br>(Others, 3-4 arrived late) | |
| Meeting Summary (next page) | | |

Meeting Report:

1. Overview of project
2. Questions for the group
    a. Areas of specific concern?
    b. Design suggestions?
    c. Other ideas?
3. Feedback from outreach group
    a. Problem areas with high populations of homeless are
        i. Flamingo Wash near Cambridge Community Center
        ii. Charleston at Maryland – in and around Circle Park – businesses there and space attracts homeless
        iii. Encampments at Mojave and Desert Inn, Pecos and Desert Inn
    b. Design details
        i. Limit side access of the trail
        ii. Visibility is very important don't design in any hideaways
        iii. Large rocks placed in areas where you don't want homeless loitering – must be cemented in so they aren't moved
        iv. Cameras are a good idea.
    c. Outreach team could patrol the area to reach out to homeless
    d. HPN runs a mobile clinic and would be interested in pulling up around there to provide services. Their 45' truck needs space to park and back out. [Could consider this as flex parking space for events and mobile trucks (food, health services, etc.).

# Wells Fargo Meeting

| | | |
|---|---|---|
| **06.28.16** | **4:00 p.m.** | **Wells Fargo Office**<br>1700 E. Charleston Blvd.,<br>Las Vegas, NV 89104 |

| | |
|---|---|
| **Meeting called** | RTC |
| **Facilitator** | Cathy Halka |
| **Note taker** | Ron Maurizi |
| **Attendees** | Anthony Velarde – Wells Fargo<br>(702-473-6014, anthony.j.velarde@wellsfargo.com)<br>Cathy Halka – RTC<br>(702-676-1721, HalkaC@rtcsnv.com)<br>Ron Maurizi –Parsons<br>(702-789-2010, Ronald.maurizi@parsons.com) |

## Meeting Summary

1. Introductions and Background
    a. Anthony is property manager for Wells Fargo (WF) for all of southern NV.
    b. Cathy gave Anthony background on the Spencer-Greenway (SG) including background on the studies, project limits, public outreach and schedule.
    c. The ultimate draft plan will be submitted in November 2016.
    d. Cathy noted that the SG was part of a Southern NV Strong study. Community members recommended this corridor and Maryland Parkway for future development.
    e. The BLM has the Phase 1 study.
2. Cathy asked if WF had an agreement with NV Energy for the dumpster space along the parking lot area south of the building.
    a. Anthony was not aware of any agreement. It has been configured as is for a very long time.
3. Cathy asked if WF had any concerns with the potential trail improvements. Anthony said WF had two main concerns.
    a. Parking
        i. This WF has is one of the highest traffic WF sites in Las Vegas and the state.
        ii. They do not have enough parking as it is so they do not want to limit parking to include trail users.
        iii. The possibility of sharing additional developed parking within the NV Energy parcel is possible however.

iv. WV has been talking of approaching NV Energy about utilizing part of their parcel for parking, but has not initiated that yet.

b. Litigation Concerns
    i. Opening the parking to the public is a litigation concern. They have had slip and fall lawsuits in their current parking lot. People just wanting to get some money from the bank.
    ii. Anthony believes WF would be open to additional shared parking as long as the legal documents were strongly written.

4. Cathy asked Ron if access to the trailhead could be accomplished in other ways if the bank was not possible. Ron said they could enter at Curtis near the trail crossing, but that was not the best approach. Entry from the east side of the trail is prohibited by the retaining wall all along the east frontage. This would be possible, but would involve significant design and coordination with NV Energy due to significant grading near their existing poles. The approach through the WF parking area or off of Charleston directly were two remaining options. The WF approach is the best option.
5. Cathy asked if WF would consider sponsoring a portion of the trail.
    a. Anthony said WF is going through a big push internally on getting LEED certified at its properties. He believed it was possible that WF might consider sponsoring a portion of the trail and/or possibly sharing a new parking area.
        i. Anthony said that strict security measures would have to be put in place restricting overnight parking. Strict hours of parking would need to be enforced with towing provisions after hours. He said that an ATM was nearby and the safety of their patrons was important.
6. Next Steps
    a. Talking to NVE for more details on parcels and openness to parking on the trail.
        i. Anthony said WF wants to work with NV Energy.
    b. Sponsoring
        i. Anthony said WF has a community outreach group. He will get information on this contact person to Cathy.

SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

# Appendices - Spencer Trail

## 2B NV Energy and CCRFCD Meeting Summaries

# NV Energy Coordination Meeting

| | | |
|---|---|---|
| **06.09.16** | **9:00 a.m.** | NV Energy Office |

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|---|---|
| **Meeting called** | RTC |
| **Facilitator** | Ron Maurizi |
| **Note taker** | Ron Maurizi, reviewed by J.P. Woyton |
| **Attendees** | Shawn Arnold – NV Energy<br>Chelsie Campbell – NV Energy<br>Sharon McShea – NV Energy<br>Connor Higgins – NV Energy<br>Cathy Halka – RTC<br>Mark Cormier – Stanley<br>Ron Maurizi –Parsons |

Meeting Summary

1. 1. Introductions and Background
    a. Cathy gave the group background of the project.
2. Trail surface
    a. Shawn noted that the proposed path can be either asphalt or concrete. However concrete is preferred because asphalt is compromised by the outriggers of their maintenance equipment. This would damage the trail and cost the trail owners money to repair/maintain.
3. Utility Lines (Consolidating Poles, Undergrounding)
    a. Cathy noted the possibility of taking the overhead lines underground throughout the corridor and looking at a few options pertaining to this. One other option was to consolidate the lines from multiple poles to one pole.
    b. Shawn said consolidating overhead lines on new poles would be less expensive than taking transmission lines underground.
    c. Shawn said consolidating was a good idea. Distribution lines are typically located on the outside of the 100' corridor while the transmission lines are generally located in the middle section of the corridor. There are 2 distribution and 2 transmission runing through the corridor. New poles would be spaced farther apart than existing poles and be taller (with higher height clearance).
    d. Shawn said taking the lines underground would also include the responsibility of getting the lines to the homeowners. He suggested Pat Brown attend any meetings when this is discussed in the future. Pat is distribution lead and government liaison at NV Energy.
    e. Ron asked about cost for consolidation and taking lines underground. Shawn said NV Energy could assist with this. It would help Shawn to have an idea of the

lines and poles affected. Ron mentioned a field visit next week where that information could be better quantified. Lisa said NV Energy could open the gates for our field visit. If there were other locks on the gates then they would be cut off. There should only be a lock for NV Energy.

f. Shawn said to identify areas of pole changes along the corridor and to meet with distribution staff at NV Energy to get direction on this type of work.

4. Funding
    a. Cathy asked if NV Energy would be interested in helping the community by donating to the project. Chelsea said NV Energy could not contribute to the underground work because the rate structure is funded by the customer. However, NV Energy could fund other items like furniture.
5. Maintenance
    a. Shawn noted that fairly frequently home owners drain pool water into the easement causing a maintenance issue for NV Energy – weeds grow. Also there is a good amount of tagging/graffiti that NV Energy cleans up regularly.
6. Trail Design and Amenities
    a. Lisa said all proposed furniture, signs, lighting, structures need to be grounded if materials warrant it. (e.g. benches may have metal components if grounded)
    b. Shawn said to check for proper clearances to power lines to make sure per NV Energy. (height clearances vary depending on pole height – consolidated poles may result in higher poles and higher clearances)
    c. Shawn said in the proposed trail configuration the wire fences limiting access to the corridor would come down and bollards would go in preventing automobiles from entering, but allowing pedestrians and bicycles to enter. Hinged collapsible bollards would allow NV Energy vehicle access .
    d. Lisa said no palm trees or pine trees were allowed in the future corridor design. Maintain a flat area around poles as well as noted in the NV Energy standards. Shawn said shade trees are fine as long as they are consolidated and work with line clearances as they mature. No irrigation around the poles is allowed.
    e. Cathy mentioned a shade treatment of solar powered ribbons on poles. Shawn said these would be fine as long as they were checked for clearance and grounded if material requires them to be.
    f. Shawn mentioned the use of talking cameras at US95/Jones as a deterrent to vandalism and general misconduct along a trail. Clark County is using this. The camera talks to the person and says it is taking a photo.
7. Parking
    a. Ron mentioned the parking issues along the corridor for the parking areas that exist. The trail might compromise parking. He is looking at mitigating some parking if necessary. He asked if there were options to adding parking to these

lots if necessary. Shawn said that was possible, but the design would have to be reviewed further to confirm.

b. Cathy mentioned that she has been part of school walk audits at Ruby Thomas E.S. The school has a lack of street frontage which causes congestions for drop-off/pick-up queues. The school is interested in parking areas within the trail area for a satellite pick up/ drop off location.

c. Lisa mentioned that Hertz (at Sahara crossing) was also looking for additional parking within the corridor. Lisa has notified them of this project so nothing has been done with Hertz pending our report summary. Cathy asked if Lisa would provide contact information so Cathy can contact them about a potential sponsorship. Lisa said that was fine and she would get Cathy a contact.

8. Easement areas
    a. Ron discussed the parking areas along the NV Energy corridor and the lack of documentation on ownership of many of these.
    b. NV Energy said they would get back to Ron on the ownership of these areas. Mark noted that all the title report requests were available. Ron showed the map and report that Mark put together. Sharon said it would be helpful for NV Energy to get copies of this information to confirm the missing information.
    c. Shawn asked Ron to send an email to Sharon requesting this work be done for the study and to provide any information he has to help them with this. Shawn said it would take about three (3) weeks to tie down ownership of these parcels.
9. Schedule/Coordination
    a. Ron asked about the timeframe for this type of work prior to construction. Shawn said there would be time needed to establish agreements with the CLV, RTC and NVE in the future. Shawn said construction would take approximately 18 months prior to beginning the trail construction.
    b. Shawn also noted that NV Energy only performs line work like this outside of the warm months. For this reason, April through the beginning of October typically restrict this type of work due to heat related energy demands in the valley and not allowing any outages during this time.
    c. Shawn said there were also fiber, communication and telephone lines on these poles. Coordination with these entities would be needed as well as with NV Energy if this goes to design.
    d. Shawn said a Design Cost Agreement (DSA) and Facility Relocation Agreement (FRA) would be needed for this type of project. NV Energy can pre-order poles if agreements are in place.

# NV Energy Coordination Meeting

| | | |
|---|---|---|
| **10.20.16** | **2:30pm** | RTC |
| **Meeting called** | RTC | |
| **Facilitator** | Cathy Halka, RTC | |
| **Note taker** | Cathy Halka & J.P. Woyton | |
| **Attendees** | Cathy Halka – RTC<br>Edgar Patino – NV Energy<br>J.P. Woyton, Parsons<br>Ron Maurizi –Parsons | |

Meeting Summary (next page)

1) Purpose – review the project with Edgar
   a) Edgar is new project contact taking over for previous NV Energy SAC member Chelsie Campbell.
   b) Cathy reviewed previous ppts from SAC meetings 1, 2, and 3 as well as the prepared ppt for the SAC Meeting #4 – October 24, 2016

2) Cathy and J.P. asked the following questions, and received the following responses:

- We are looking for the plan to identify a leader to bring the project forward after this plan is complete. I'd like to get your thoughts on who that leader should be. NV Energy owns the land, the City of Las Vegas and the County have the project management personnel, all three would be suited to applying for Transportation Alternatives funding. What is NV Energy's preference?

  *Clark County or The City*

- We are looking at the option of using asphalt for the trail. In the past we have heard that asphalt gets torn up easily by maintenance trucks. However, the Amargosa trail uses asphalt. Could asphalt be an option for the Spencer trail?

  *Asphalt could be used, conditioned upon the understanding that if nve made repairs and damaged the asphalt, nve would not be responsible for the repairs*

- Utility poles – we are leaning towards a preferred option of consolidating poles and like the benefits of fewer poles, wires being higher, and poles spaced out farther apart. Could you please provide specifications on the upgraded poles?

  *We cannot provide the information until we are provided the locations of where the project starts and ends for the first phase, and which specific poles are to be relocated. Once we have this info, we can help aquire the info you want.*

- How often do asphalt trails need to be repaired due to NVE trucks?

  *Not specifically known (Shawn Arnold may have more info).*

- Is there a specific type of pole used for consolidating utility lines?

  *Stronger or taller poles, may be spaced farther apart.*

- What is the potential for increasing this spacing between poles. Is it possible to have 1 pole per median block for instance?

  *This would have to be evaluated on a case-by-case basis. Edgar suggested selecting one specific location along the corridor as an example to evaluate this. Provide this to Shawn Arnold.*

- We understand consolidating poles would be less costly than undergrounding the utility lines. Can you provide us with a general range of the cost of consolidating versus undergrounding (knowing that this cost will change depending on other factors).

  *Edgar said he would check on this.*

- Several sections of the corridor have fencing around them. The trail would need to have these areas remain open to allow for the continuous flow of users. We would not want gate access at every block. Is this possible and what conditions are permitted by NVE in terms of fencing?

  *Edgar said he would check on this.*

- The group looked at the open space in front of one of the substations (north of Sahara) and asked if this space is available for trail elements (perhaps a resting area with some educational information on NVE)?

  *This open area may be set aside for truck access. It appears trucks may enter in through the side and come out the other side, where the open area is. Sizes of trucks vary depending on pole sizes. Steel poles require larger trucks.*

- Would the NVE Foundation be a possible source of funding for some components of the trail if the application was made by a non-profit organization (such as OLVF)?

  *Yes, it would be a good lead. NVE is proud of this foundation and it is run by people that work locally at NVE. It was started by Berkshire Hathaway. It has millions of dollars available and they plan to keep it funded for the next several years. NVE already supports OLVF. Criteria for the application is on the website. This funding is not impacted by profit goals or PUC regulations.*

- Please review the SAC meeting materials, the concept maps, the trailheads and the rendering and provide any comments, especially if there are any elements that should not be included per NVE policy.

  *NVE was purchased by Berkshire Hathaway and safety is the company's #1 priority. This will be reflected in much of the decisions made. Also the 2 principal items for NVE to sign off on will be 1) Land rights and 2) Operational considerations. Edgar will invite key folks from NVE to future meetings for their feedback.*

# NV Energy Coordination Meeting

| | | |
|---|---|---|
| **11.01.16** | **8am** | NV Energy (6226 W Sahara Ave) |
| **Meeting called** | RTC | |
| **Facilitator** | Cathy Halka, RTC | |
| **Note taker** | Cathy Halka & J.P. Woyton | |
| **Attendees** | Cathy Halka – RTC<br>Shawn Arnold, NV Energy<br>Edgar Patino – NV Energy<br>J.P. Woyton, Parsons | |

Meeting Summary (next page)

1. Purpose – review project history and concepts to date and address questions for NV Energy.
2. There are two pole/line elements in the corridor: distribution and transmission
    a. Suggests distribution goes underground since some of it already is
    b. Suggests transmission poles can be consolidated onto newer taller poles
    c. Outer poles are distribution, inside poles are transmission.
3. For decoration on utility poles would need to do a cover. Look at City of Las Vegas' Gass Street example. A wood panel around the pole that can be removed for pole maintenance, if they need to climb up. Height of pole wrap depends on the pole design
4. Most trails city owns and an easement is given to NV Energy
5. Need to meet with Lands Dept to understand NV Energy preference for ownership/easement by NV Energy or local jurisdiction.
6. NV Energy staff will need to look at distribution to understand what can be done.
7. For a newer pole, only 4 circuits/lines (3 conductors make a circuit)
8. Costs could change significantly if federal funding with Buy America requirements is used. (e.g. would require all iron and steel be sourced from USA – more expensive)
9. Maintenance vehicles – only for maintenance, emergencies or adjustment/change. 1-2 times per year typical. NV Energy would not be responsible for repairs to asphalt trail if maintenance vehicles cause damage.
10. Poles require a 4' horizontal clearance
11. Consolidation of poles could result in a typical 500 ft span between poles.
12. 12' wide access space required for NV Energy maintenance vehicles.
13. General cost range for consolidation of poles: please request a Rule 9 review to evaluate, submit request to Shawn Arnold.
14. Asked about approval to use open space in front of substation, Shawn to look into this.

# NV Energy Coordination Meeting

| | | |
|---|---|---|
| **12.19.16** | **1:30pm** | NV Energy (6226 W Sahara Ave) |

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|---|---|
| **Meeting called** | RTC |
| **Facilitator** | Cathy Halka, RTC |
| **Note taker** | Cathy Halka & J.P. Woyton |
| **Attendees** | Cathy Halka – RTC<br><br>NV Energy: Shawn Arnold (Sr. Administrator of Government Projects), Adelma Thom (Senior Project Manager), Keith Jackson (Supervisor of Design), Cynthia Skomak (Senior Right of Way Agent), Steven Payne (Principal Engineer),<br><br>J.P. Woyton, Parsons |

Meeting Summary (next page)

1. Purpose:
    a. Overview of project status to NV Energy division staff
    b. NV Energy staff to review project area with project team
    c. Review Engineering Study scope and options for preparing cost estimates for project
2. Project area is too complex to complete a Rule 9 cost estimate. Will need to do a full Engineering Study to determine cost of consolidation of poles. Engineering Study Agreement (ESA) required.
3. Variable to prepare the cost estimate include:
    a. Types of transmission poles
    b. Connections to subtsations and othe lines
    c. Other utility lines sharing use of poles
    d. Distance away from service points, how many customers are served
    e. Angle of homes
    f. Whether distributon is on the east, west or both sides
    g. There is a "cascade effect" for any changes made for which is difficult to account
4. A good scenario for consoliation is one where there are no service drops off from the poles on one side and if distribution is already udergrounded. It is much more expensive when there is overhead distribution on both sides of the corridor.
5. Estimated time required to complete ESA results in $152,000 cost estimate. Could be less if they find review and estimation can be completed more quickly.
    a. Can complete in two phases to break up cost if need be.
6. ESA would also evaluation lease/purchase options for property
7. From Nahatan to Twain, the distribution lines (outside poles) don't serve the adjacent homes directly
8. Can't eliminate work on one section and continue consolidation on another – it must be continuous
9. $50-$60M for undergrounding but this is not a confirmed estimate.
10. Sahara substation – plans to expand northward approximately 4 properties in length. They are not sure about the "Sahara Plaza" with an Electric Art Opportunity being recommended, Adelma to confirm if this is possible.
11. Federal funding may initiate Buy America provisions. NV Energy will eed to know this sice it will greatly increase costs for construction.
12. After the ESA is complete, there would also need to be a Design Cost Agreement to accompany the trail design phase. Includes Land Acquisition Permits.
13. NV Energy is highly in favor of the trail including lighting.

NVEnergy

January 9, 2017

Cathy Halka
Senior Transportation Planner
RTC of Southern Nevada
600 S. Grand Central Parkway, Suite 350
Las Vegas, NV 89106

Dear Ms. Halka:

Re: Spencer Greenway Trail & UNLV Campus Bike Plan – Preliminary Scoping Estimate

As requested, NV Energy reviewed the conceptual plans for the Spencer Greenway Trail & UNLV Campus Bike Plan provide by the RTC and their request to consolidate the existing NV Energy overhead facilities and place some of those overhead facilities underground. A high level preliminary scoping estimate was developed for a total of $28,000,000. For this preliminary scoping estimate it is assumed that this project will not be taxable. If it is determined this project is taxable the CIAC tax rate applicable will be the one in effect the date the NV Energy project is placed in-service.

This preliminary scoping estimate is provided solely for the purpose of aiding in your decision making process to move forward with the NV Energy Engineering Study Agreement. For the avoidance of doubt, NV ENERGY DOES NOT GUARANTEE OR WARRANT, EXPRESSLY OR IMPLIEDLY, IN ANY FASHION THE CORRECTNESS OR COMPLETENESS OF THE PRELIMINARY SCOPING ESTIMATE AND IT SHOULD NOT BE CONSTRUED AS AN AFFIRMATION THAT NV ENERGY CAN IN FACT CONSOLIDATE THE EXISTING FACILITIES ON ONE POLE LINE WITH THE INSTALLATION OF ADDITIONAL UNDERGROUND FACILITIES BEING ADDED. THE PRELIMINARY SCOPING ESTIMATE IS SUBJECT TO CHANGE AND IS BASED ON CURRENTLY KNOWN FACTORS AND ASSUMPTIONS LISTED BELOW, WHICH ARE NOT ALL-INCLUSIVE. BY ACCEPTING THIS PRELIMINARY SCOPING ESTIMATE, YOU AGREE THAT NV ENERGY BEARS ABSOLUTELY NO LIABILITY TO YOU, YOUR EMPLOYEES, OFFICEERS, DIRECTORS, AGENTS, ATTORNEYS OR THIRD PARTIES, FOR ANY DAMAGES, LOSSES, PENALTIES, LEGAL COSTS, ATTORNEYS FEES, WHETHER INCIDENTAL, CONSEQUENTIAL, DIRECT OR INDIRECT, THAT ARISE FROM OR ARE RELATED TO, YOUR USE OF, AND RELIANCE UPON, THE INFORMATION CONTAINED HEREIN. NV ENERGY MAKES NO PROMISES OR COMMITMENT AS TO THE ACCURACY OF THIS PRELIMINARY SCOPING ESTIMATE OR ITS USEFULNESS TO YOU OR THIRD PARTIES.

YOU ACKNOWLEDGE AND UNDERSTAND THAT THIS PRELIMINARY SCOPING ESTIMATE IS ALSO SUBJECT TO THE RULES AND REGULATIONS OF THOSE PARTICULAR TARIFFS, LAWS, REGULATIONS AND STANDARDS THAT GOVERN NV ENERGY OR THAT NV ENERGY ELECTS TO FOLLOW AND BY WHICH IT PRACTICES. YOUR USE OF THIS INFORMATION IS AT YOUR OWN RISK.

Please note that the high level preliminary scoping estimate is subject to change based on the results of the engineering study and the actual final designs and construction costs. This project is also contingent upon approval by the appropriate government entities and obtaining permit(s). Please see the below list of assumptions made in order to develop the high level preliminary scoping estimate.

NV Energy Lands Assumptions:

1. NV Energy is able to and is willing to sell the property to the appropriate government agency in fee simple title and retain a perpetual easement for NV Energy facilities. The value of the property will be determined by a MAI Certified Appraiser approved by NV Energy
2. A transmission use agreement is entered into by NV Energy and the agency who owns fee title to the corridor property.
3. NV Energy will contemplate a lease in the engineering study.
4. The cost for third party easements (including any legal process required to obtain same) is not included in the scoping estimate

NV Energy Transmission Assumptions:

1. That NV Energy can consolidate the transmission lines in some of the areas.
2. No underground transmission facilities are considered in this scoping estimate.
3. Work will need to be scheduled outside of NV Energy's outage window. Due to heavy load use in the summer, NV Energy is restricted and does not take scheduled outages on transmission lines from May to September.

NV Energy Distribution Assumptions:

1. Locations for pad mount transformers and switches have not been identified.
2. Assume we have access to private property to convert some of the panels from overhead to underground and will be able to obtain new perpetual easements for the new service runs.
3. Outages will need to be coordinated.

NV Energy Communication Assumptions:

1. That no re-routes for NV Energy communications facilities are required.
2. The fiber is installed first prior to removals.
3. No underground work for transitions are considered in this scoping estimate for NV Energy communication facilities.
4. If there are any third party attachments to the existing pole lines, you will need to work with those companies to obtain costs for the relocation of their facilities.

Any additional items not contemplated in this preliminary scoping estimate if needed, will be addressed during the engineering study. If you decide to move forward with the Engineering Study Agreement, please let me know and NV Energy will provide an updated agreement. Once NV Energy receives the signed agreement and advance, the engineering study will commence.

Please let me know if you have any questions.

Sincerely,

Adelma Thom
Sr. Project Manager - Delivery

| CCRFCD | | |
|---|---|---|
| 07.07.16 | | |
| **Meeting called** | Ron Maurizi | |
| **Facilitator** | Ron Maurizi | |
| **Note taker** | Ron Maurizi | |
| **Attendees** | CCRFCD:<br>Andrew Trelease<br><br>PARSONS:<br>Ron Maurizi | |
| Meeting Summary (next page) | | |
| | | |

A summary of meeting discussions.

Existing conditions:

1. No problem with a bicycle lane along their existing maintenance roadway. Typically the RFCD requires access on both sides of the channel or one side of the channel with access along the bottom of the channel. The future trail cannot run along the bottom of the channel. It looks like the maintenance road is full width and along one side of the channel east of Maryland Parkway. So there is good usable maintenance roadway from Spencer to Maryland Parkway within the channel ROW.
2. No real usable roadway from Maryland Parkway to Cambridge within the channel ROW.

First Possible Future Alternative:

3. Fortunately the CCRFCD has a project planned to improve this same segment of the channel in the next 5 to 10 years. Design is scheduled for 2018/19 and construction 2019/20. This is most likely to add a maintenance roadway and to possibly reshape the channel similar to the east of Maryland section which is a square configuration.
4. Andrew said the timing of this improvement is not up to CCRFCD but up to CCPW. He said it was quite possible that if we spoke with Denis Cedarburg he could move this up in the schedule. It is possible this channel could be improved with the Spencer project timeline.

Second Possible Alternative Along Flamingo Wash:

5. It is possible to also consider crossing Maryland Parkway on street level and utilize the Target drive (south of the channel) behind the store as a trailway. The CCRFCD would allow a pedestrian bridge over the channel (if we were to consider this) and that would take us back to the County property on the north side of the channel (about halfway between Cambridge and Maryland Parkway) and ultimately to Cambridge. That would require lane markings and striping along their driveway if everything were to fit. It looks like it would work via Google Earth.

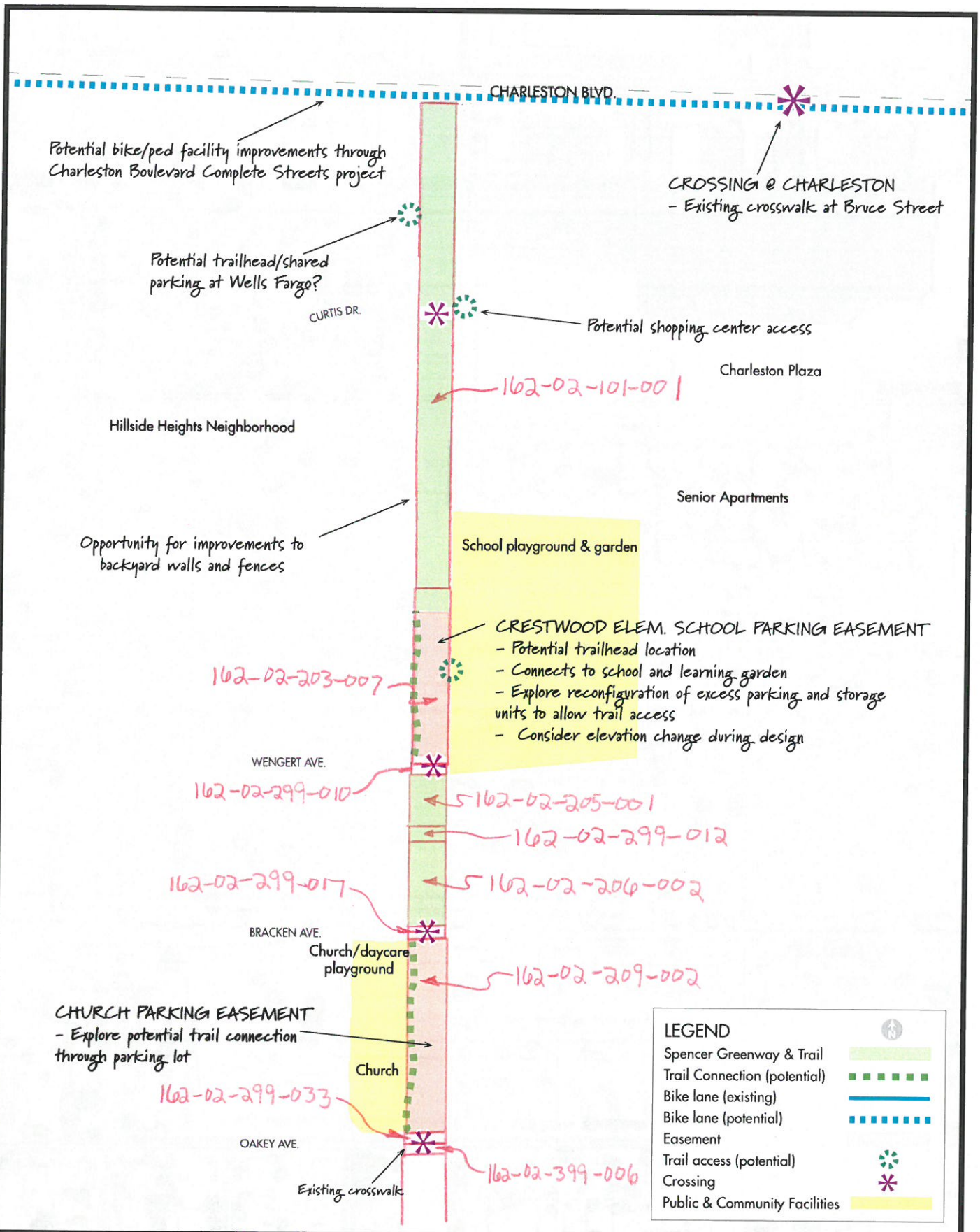
Overall this makes the channel a more promising option of the four alternative routes to UNLV from the Spencer Trail. I will still show it as a "fourth" alternative because the scheduling of these improvements is not certain. It could be considered an ultimate long term improvement to the trail.

The maintenance roadway comes up from the wash to Maryland Parkway from the east (see attached images). The RFCD will not allow trails along the bottom of the wash and I do not believe there is enough room to have a the maintenance roadway/trail extend under Maryland Parkway and allow clearance as well as maintaining the hydraulic needs of the channel. I will talk to Kathy about the timing of RFCD construction and an at-grade crossing on Maryland Parkway. We could also consider a pedestrian/bicycle bridge over Maryland Parkway if the new Flamingo Wash maintenance roadway west of Maryland Parkway is designed to accommodate one.

SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

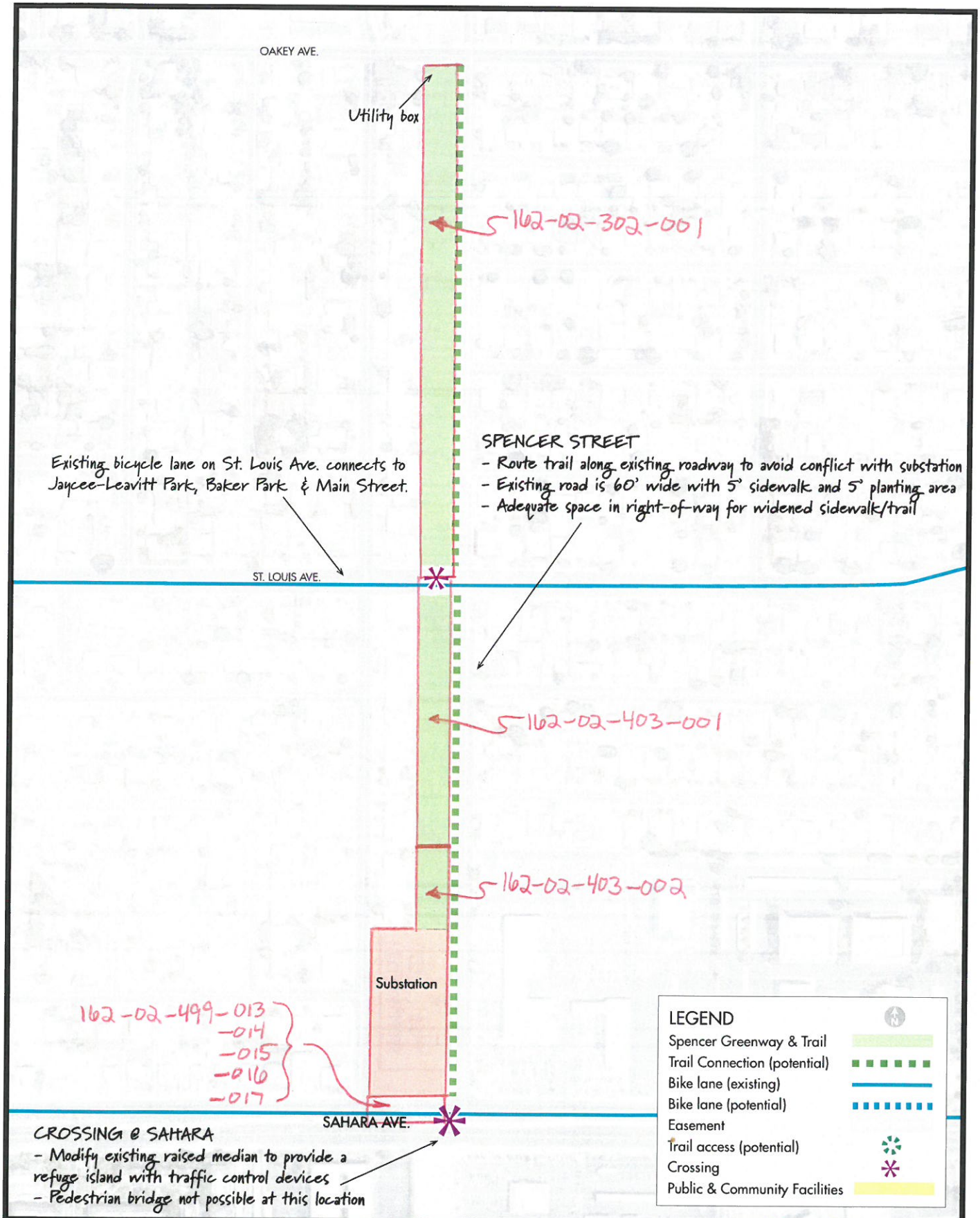
# Appendices - Spencer Trail

## 2C ROW Information



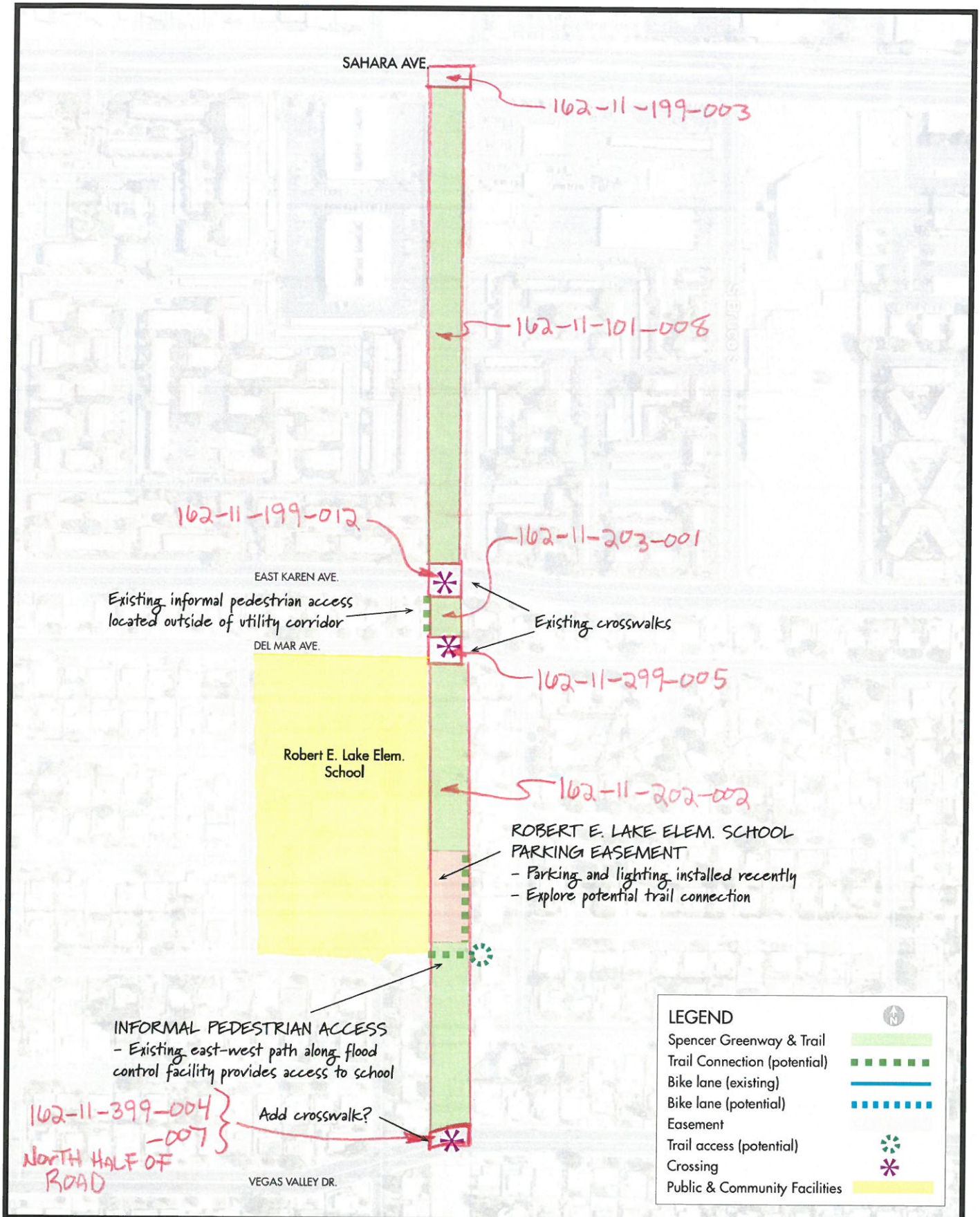

SPENCER GREENWAY
Preliminary Corridor Assessment

Map 1: Charleston to Oakey



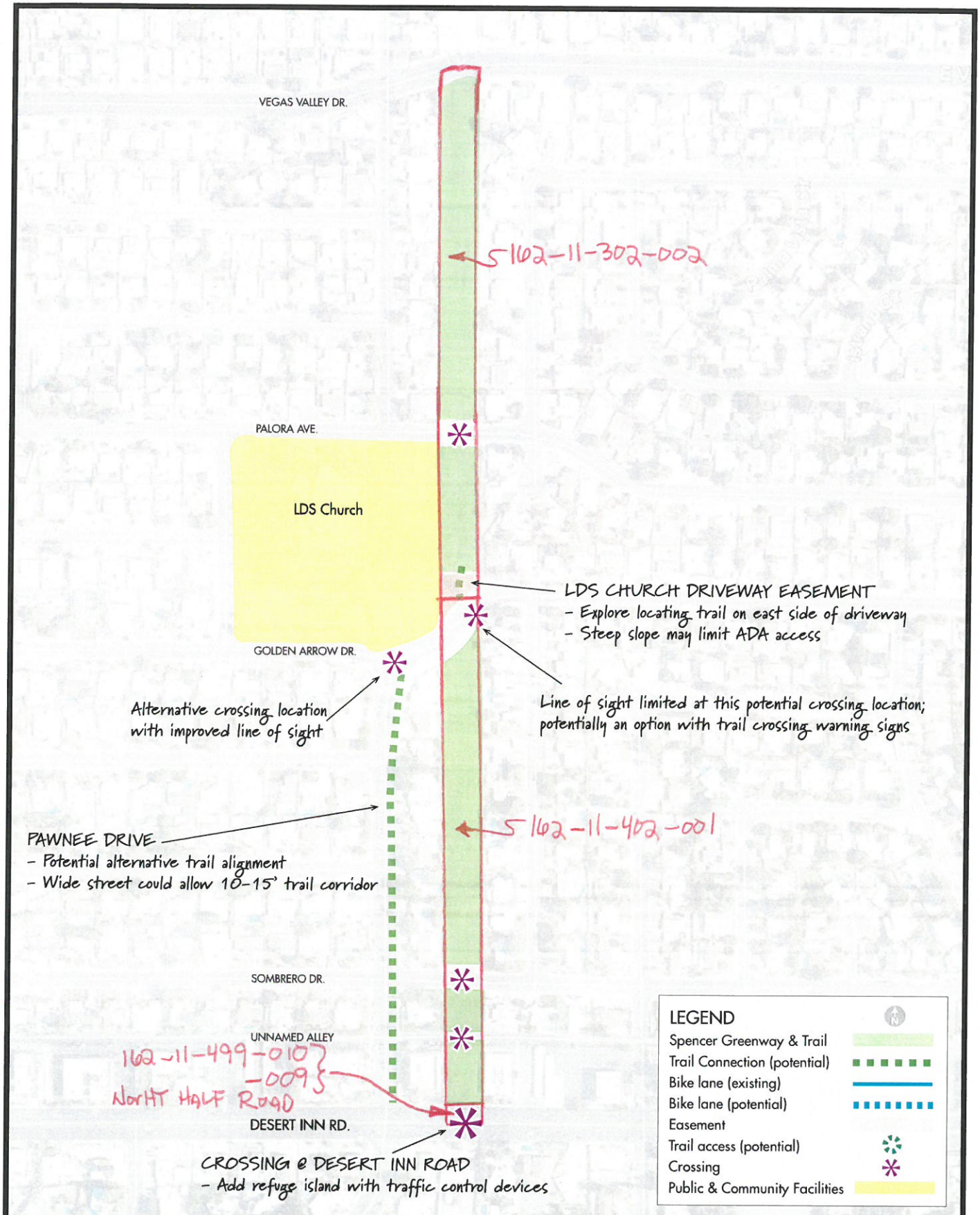

SPENCER GREENWAY
Preliminary Corridor Assessment

Map 2: Charleston to Sahara



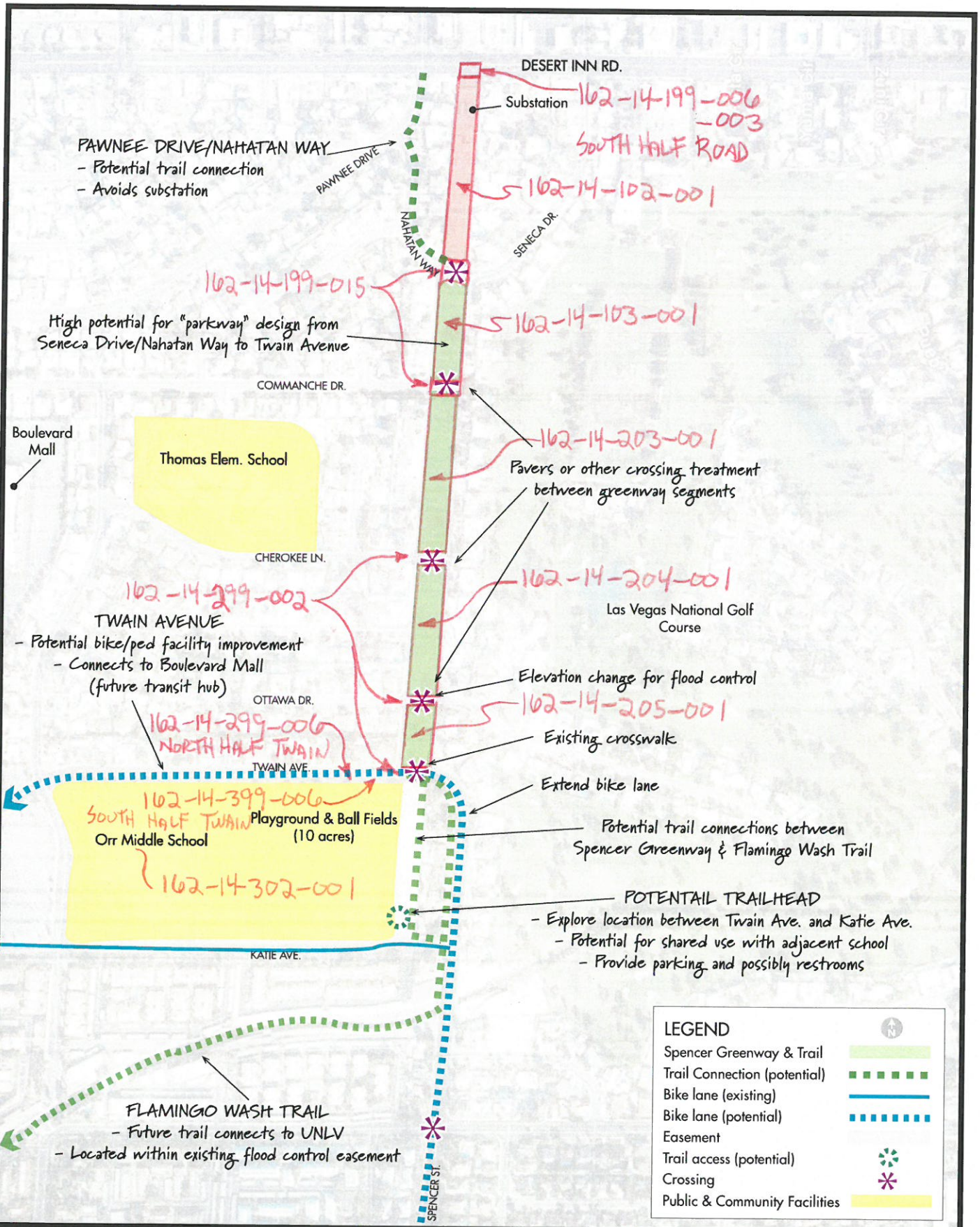

SPENCER GREENWAY
Preliminary Corridor Assessment

Map 3: Sahara to Vegas Valley




SPENCER GREENWAY
Preliminary Corridor Assessment

Map 4: Vegas Valley to Desert Inn




SPENCER GREENWAY
Preliminary Corridor Assessment

Map 5: Desert Inn to Flamingo Wash

PROPERTY RESEARCH

162-02-101-001 (Have Title Report)
Ownership to Southern Nevada Power Company. Document number 25:79639.
There are two easements to Southwest Gas Corp and LVVWD on the northerly boundary of parcel along Charleston Boulevard.
Curtis Drive crosses parcel however there is no recorded right-of-way or easement.

162-02-203-007 (Have Title Report)
Ownership to Southern Nevada Power Company. Document number 25:79638.
Property is almost entirely covered with parking lot.
Property goes out to the centerline of Wengert Avenue, however there is no recorded right-of-way or easement.

162-02-299-010
Road parcel with no recorded document. Contacted the County Assessor's office and they have no information on the parcel.

162-02-205-001
Ownership to Southern Nevada Power Company. Document number 25:79638.

162-02-299-012
Road parcel with no recorded document. Contacted the County Assessor's office and they have no information on the parcel.

162-02-206-002
Ownership to Southern Nevada Power Company. Document number 25:79638.

162-02-299-017
Road parcel with a recorded document, however the document cannot be found.

162-02-209-002 (Have Title Report).
Ownership to Southern Nevada Power Company. Document number 25:79638.
There is a parking lot on the parcel, however the Title Report does not show any recorded easement.

162-02-299-033
Road parcel with no recorded document. Contacted the County Assessor's office and they have no information on the parcel.

162-02-399-006
Road parcel with no recorded document. Contacted the County Assessor's office and they have no information on the parcel.

162-02-302-001
Ownership to Southern Nevada Power Company. Document number 25:79637.
Property goes out to the centerline of St. Louis Avenue, however there is no recorded right-of-way or easement.

162-02-403-001
Ownership to Southern Nevada Power Company. Document number 26:88153.
Property goes out to the centerline of St. Louis Avenue, however there is no recorded right-of-way or easement.

162-02-403-002
Ownership to Southern Nevada Power Company. Document number 26:88153 and 27:24521.

162-02-499-013 and 014
Road parcel document 2041:2000463.

162-02-499-015
Road parcel with a recorded document (0070:0406153), however the document cannot be found.

162-02-499-016
Road parcel document 150:0123166.

162-02-499-017
Road parcel with a recorded document (0070:0403199), however the document cannot be found.

162-11-199-003
Road parcel document 0520:0418629.

162-11-101-008
Ownership to Nevada Power Company. Document number 25:79637.

162-11-199-012
Road parcel document 0445:0404146.

162-11-203-001
Ownership to Nevada Power Company. Document number 25:79637.

162-11-299-005
Road parcel document 0396:0319739.

162-11-202-002 (Have Title Report).
Ownership to Nevada Power Company. Document number 25:79637.
Property has a parking lot and drainage on it.

162-11-299-007
Road parcel document 0396:0319739.

162-11-399-004
Road parcel document 0396:0319739.

162-11-302-002 (Have Title Report).
Ownership to Nevada Power Company. Document number 25:79637.
Property has a parking lot drive way on it, however the Title Report does not show any recorded easement.
The southerly portion of Vegas Valley Drive, all of Palora Avenue, and a small triangular piece of Golden Arrow Drive cross on the property and there are no recorded easements or right-of-way.

162-11-402-001 (Have Title Report).
Ownership to Nevada Power Company. Document number 25:79637.
Property has a parking lot drive way on it, however the Title Report does not show any recorded easement.
The Golden Arrow Drive and Sombrero Drive cross on the property and there are no recorded easements or right-of-way.

162-11-499-009
Road parcel document 0431:034759

162-11-499-010
Road parcel with no recorded document. Contacted the County Assessor's office and they have no information on the parcel.

162-14-199-003
Road parcel document 0417:0376909.

162-14-199-006
Road parcel document 0431:0347593.

162-14-102-001
Ownership to Nevada Power Company. Parcel with no recorded document. Contacted the County Assessor's office and they have no information on the parcel. (Ownership appears to have come from a BLM row grant).

162-14-199-015
Road parcel document from Plat Book 6 page 80 (334:0270112).

162-14-103-001
Ownership to Nevada Power Company. Parcel with no recorded document. Contacted the County Assessor's office and they have no information on the parcel. (Ownership appears to have come from a BLM row grant).

162-14-203-001
Ownership to Nevada Power Company. Parcel with no recorded document. Contacted the County Assessor's office and they have no information on the parcel. (Ownership appears to have come from a BLM row grant).

162-14-299-002
Road parcel document from Plat Book 8 page 24.

162-14-204-001
Ownership to Nevada Power Company. Parcel with no recorded document. Contacted the County Assessor's office and they have no information on the parcel. (Ownership appears to have come from a BLM row grant).

162-14-205-001
Ownership to Nevada Power Company. Parcel with no recorded document. Contacted the County Assessor's office and they have no information on the parcel. (Ownership appears to have come from a BLM row grant).

162-14-299-006
Road parcel document 0178:0145332.

162-14-399-006
Road parcel document 0172:0140638.

162-14-302-001
Ownership to School Board of Trustees County of Clark (PK & Comm) Lease. Document number 0364:293754.

# Appendices - Spencer Trail

## 2D Conceptual Level Cost Estimate

Spencer Trail
Conceptual Level Cost Estimate

| Major Pay Item | Unit | Unit Cost | Quantity | Total Cost |
|---|---|---|---|---|
| NV Energy Engineering Study | 1 | $ 160,000 | 1 | $ 160,000 |
| 15' Asphalt Path | LF | $ 50 | 9,240 | $ 462,000 |
| Lighting | EA | $ 2,500 | 92 | $ 231,000 |
| Pedestrian Crossings (Basic: ramps, striping, signage) | LS | $ 30,000 | 15 | $ 450,000 |
| Pedestrian Crossings (Basic, plus traffic control devices) | LS | $ 80,000 | 5 | $ 400,000 |
| Parking Lots | SF | $ 4 | 30,000 | $ 120,000 |
| Landscaping | SF | $ 5 | 92,400 | $ 462,000 |
| Trailhead with Basic Amenities | EA | $ 150,000 | 2 | $ 300,000 |
| **Sub-Total Major Pay Items** | | | | $ 2,585,000.00 |
| | | | | |
| **Contingency 20% (account for minor items below and unknowns)** | | | | $ 517,000 |
| *Construct Pedestrian Refuge Median* | | | | |
| *Concrete Sidewalk* | | | | |
| *Removals* | | | | |
| *Erosion Control* | | | | |
| *Drainage Items* | | | | |
| *Embankment Material* | | | | |
| *Fencing/Gates* | | | | |
| *Irrigation* | | | | |
| *Pavement Markings/Striping* | | | | |
| *Regulatory/Directional Signage* | | | | |
| *Curb Wall* | | | | |
| *Existing Signal Modifications* | | | | |
| *Traffic calming elements* | | | | |
| *Utility Adjustments* | | | | |
| *Retaining Walls* | | | | |
| *Bollards* | | | | |
| | | | | |
| **Sub total project construction costs** | | | | $ 3,102,000.00 |
| **Construction Design Engineering (15%)** | LS | $ 465,300 | 1 | $ 465,300 |
| **Total Design and Construction*** | | | | $ 3,567,300 |
| **Projected Cost Range (depending on design items included):** | Low | $ 1,783,650 | High | $ 5,350,950 |
| | | | | |
| *** NOT INCLUDED** | | | | |
| Power Lines to Underground | | | | |
| Power Lines to Consolidate | | | | |
| Art Opportunities | | | | |
| ROW Aqcuisition or Land Agreements | | | | |
| Mobilization and Traffic Control (during construction) | | | | |
| Ultimate Alternative: Trail Alignment Along Wash | | | | |

SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

# Appendices - UNLV Campus Bicycle Plan

## 3A UNLV Coordination Meeting Summaries

# UNLV Coordination and Comment Meeting

| | | |
|---|---|---|
| 08.23.16 | 3:00 pm | UNLV Campus - Campus Services Building - Conference room 131B |

| | |
|---|---|
| Meeting called by | RTC |
| Facilitator | Cathy Halka (RTC) and J.P. Woyton (Parsons) |
| | |
| Attendees | JP Woyton, Parsons Transportation<br>Cathy Halka, Regional Transportation Commission (RTC)<br>Tad McDowell, UNLV, Parking & Transportation Services<br>Jeff Panchavinin, UNLV, Housing<br>Belinda Foreman, UNLV, Campus Life<br>Katie McMath, UNLV, Campus Life<br>Bob Dincecco, UNLV, Planning & Construction<br>David Frommer, UNLV, Planning & Construction<br>Carlos Fernandez, UNLV, CSUN President<br>Meghan Pierce, UNLV, Past CSUN President<br>Kanani Espinoza, UNLV, Past CSUN President<br>Kim Case-Nichols, UNLV, Student Affairs Maintenance |

## Meeting Summary

A summary of the meeting discussion follows with respect to the agenda format:

1. After brief introductions, Cathy gave a brief background of the project. The purpose for today's meeting is to request feedback on the concepts presented at the Stakeholder Advisory Committee, Progress Meeting #3 held on July 14, 2016.

2. J.P. reviewed the scope and progress status with the group.

David could only stay for the start of the meeting. Before leaving, he offered the following input on the conceptual plan:

- He requested that recommendations for this project continue coordination with progress on the UNLV Campus Master Plan. Locations and nodes should tie into this plan.
- Dedicated bike routes may not work on this campus. They have not done this before. The pathways are multiuse and there may be conflicts with emergency vehicles.

3. J.P. reviewed comments provided during the previous SAC meeting. He also reviewed some specific follow-up questions outlined for this meeting.

**Meeting minutes are considered final and agreed upon if no comments are received after one week of distribution**

Some staff believe that bike riders are mostly those that live on campus but they were not certain. Bike racks generally appear to be filled/used often.

J.P. asked about the methodology of the "Bicycle Racks and Usage" data collection study completed in November 2013. Tad stated the study involved 1-2 weekdays using some of his staff to collect the data during peak hours. However, occupancy at dorm rooms has increased about 70% since the date of this study, so bicycle utilization has likely also increased. J.P. pointed out the top 10 highlighted locations form this table and asked if these locations still seem to be logical for placement of bike parking. The group agreed however, Tad mentioned that locations 11 and 12 dorm rooms could probably also be included. Bike parking could be placed in consolidated nodes where multiple destinations/dorms could utilize the parking.

In order to help with the UNLV's plan vision and prioritization, J.P. asked about what funding is available for the bike plan, including O&M costs. Tad stated UNLV doesn't have funding designated for the bike plan improvements right now but they are committed to implementing the plan. Bob suggested a student group could design or implement a portion of the plan such as a node of parking. Student Government has some funding ($1.4M budget) and could implement components. They just authorized $250,000 to install code blue phones around campus. Student Government was involved 2-3 years ago and had allocated funding for bike lockers at that time, but this project did not happen.

J.P. pointed out that the scope is currently written to only address bike parking for visitors, and not for residents/dorms. The scope also refers to bike sharing as a secondary/future option. After discussing this with Cathy, they believe each of these bike system options could be looked at as having components that are implemented concurrently as a part of the bike plan, with additional phasing for future development of the plan. Bob said he thinks a bike share system would be good and UNLV staff present generally agreed. Tad stated that the focus has been on bike parking but he has been talking with Ron Floth (RTC) about bike share on campus.

4. J.P. reviewed the draft TOC with the group and asked for any feedback.

Bob suggested that it would be beneficial to include some case studies in the report. Also to compare UNLV to other universities. J.P. agreed, stating that some have already been reviewed and summaries can be included in the report and in the appendices. No other comments were received and the group was in agreement with the outline.

5. J.P. referred the group to the 11x17 handout including the plan recommendations.

J.P. pointed out that trade-offs will be required in order to have a successful bike plan implemented on campus. He pointed out that nearly all space within UNLV are currently being used for something, and in order to implement improvements some space needs to be converted. J.P. went through the list of tradeoffs requesting UNLV feedback and the following responses were provided:

- Converting portions of paved paths to dedicated bike lanes? Not likely for pedestrian pathways, at least in the short-term plan. This may be considered on future phases of the plan if initial improvements significantly increase bike users and bike culture on campus. Converting vehicle road space to bike lanes might be feasible.
- Converting existing landscaping to bike storage facilities? Yes, could be possible.
- Locations that may typically reserved for events, public or free-speech? Free speech area is changing. It is no longer going to be in designated areas. UNLV is allowing free speech anywhere that traffic flow is not impeded.
- Converting indoor space (for example, inside the Student Union)? Not feasible.
- Converting outdoor parking areas not being utilized? Not big enough for a consolidated facility acting as a node.
- Converting indoor parking garage areas? Bob stated that this would be very unlikely. It would be acceptable if bike parking was associated with parking garages, however, the vehicle spaces cost about $15k to $18K per space with annual parking revenues at $275/space and they need the parking revenue. There's a high demand for parking on campus. Maybe the plan could look at a smaller option, such as 4 spaces, but he does not like bike lockers.

The following is additional discussion of the plan development:

Bicycle Routes

J.P. requested UNLV review the proposed routes identified and determine:

a. Agreement with proposed routes. Should any be removed or additional routes added.
b. Provide input on prioritization of routes.
c. Agreement on proposed locations for wayfinding/signage.

J.P. acknowledged that the bicycle dedicated paths may not be acceptable to UNLV. J.P. asked about the roads located within UNLV, how are they improved and maintained. Bob mentioned that UNLV does have jurisdiction on these roads but has challenges with maintenance, and even with the parking structures. J.P. asked if UNLV would be open to making improvements to these roads as part of the bike plan. For example, an easy, low-costing improvement with significant benefits would be striping some of the roads with bike lanes. Bob stated that this could be an acceptable recommendation.

J.P. asked if UNLV has any standards for wayfinding and signage used on campus so any recommendations in the bike pan would be consistent with this. Bob stated that UNLV does not have a set of standards for this. Buildings currently use a 3-letter code and amp system that is not very user-friendly. He stated that UNLV needs to do a complete redesign of this for there currently is no funding or program in place. For now, he recommends the bike plan acknowledge this need and that the bike plan signage be included in a future project for designing overall campus wayfinding standards.

Bob stated they would like more time to review the concepts provided at the July 14th meeting. He stated that it is difficult even to walk on campus. The mall area gets congested and there are carts and trucks for deliveries. Students are walking while looking at their phones – bumping into things. Bicyclists want to get to destinations fast. It may be better to go around campus instead to avoid congested areas. He suggested looking at secondary paths and backways for bikes. Maryland Parkway project is proposing bike lanes on that corridor, however, these improvements would only occur in 6-7 years.

Bob likes the idea of doing a pilot project first to see how it goes. He suggests starting with one north/south route and one east/west route. He is supportive of routes having bike signs, banners and bike paint symbols on the pathways.

Also, UNLV is trying to plan a route through campus for bus service and has been in conversations with RTC.

Bicycle Parking Nodes

Carlos stated students don't feel safe parking their bikes on campus due to theft. J.P. agreed stating this has been the #1 concern expressed by the majority of public during our outreach efforts. The survey indicates if this issue alone is addressed it could significantly increase the number of bike users on campus.

Kim stated covered bike parking is an attractive option. She prefers to ride directly to her building or final destination with parking right near the entrance. She likes an iconic covered bike parking area – a fabric canopy maybe – something recognizable. She will make short trips on her bike from building to building just to get there faster. She suggested the plan start with secure parking, use this to build the campus biking culture, then add enhanced or dedicated paths. She referenced a trip to San Diego State.

Bob prefers clustered nodes of parking areas rather than increasing parking at numerous locations. He says there is not enough available space at front doors so don't put bike parking there. He believes the new plan can be coordinated with promotions to students such as including map handouts during orientation.

The group discussed where possible bike parking facilities or hubs could be located.

- University Park will create a mass of students.
- The North Field seems like a very good central location, however it is very congested and will now be the future site of the new College of Administration Hospitality Hall, so there will be minimal space still available here.
- The landscaped area near the volleyball courts by the dorms on the south side of campus behind the catholic church is a good location for bike parking for those living in

the dorms. However this area also has some vagrants, so it would need to be carefully secured.

- Bike parking on the south side of the Rec Center garage is another option. The area in landscaping is good – lots of people park near there and walk by.
- Some of the group stated the Tropicana parking structure could be a possible node. It has high visibility and is a major entry point for the campus. It also has some landscaping that might be used.
- The group discussed the transit center. J.P. stated this location has 110 bike racks and yet they are almost never utilized (referencing the Bike Rack Usage study and his personal experience). He asked the group if this was because of a security concern, or if there was another reason. The group was in resounding agreement that it was due to a security concern and the racks would likely be used if this could be addressed. The group also suggested this could be a great bike share location. They also stated that a bike hub here would be acceptable because it is near the community, but would not be a market for a bike hub for campus alone. Outreach to the broader community is important. Needs to have a revenue stream.

6. The group will set up a day to do a campus site review for locations where bike parking facilities and/or hubs could be located.

# UNLV Campus Bike Tour

| | | |
|---|---|---|
| 09.06.16 | 8:00 – 10:15 am | UNLV Campus |

| | |
|---|---|
| Meeting called by | RTC |
| Facilitator | Cathy Halka (RTC) and J.P. Woyton (Parsons) |
| | |
| Attendees | Cathy Halka (RTC)<br>J.P. Woyton (Parsons)<br>Ron Floth (RTC)<br>Robert Dincecco (UNLV)<br>Kimberly Case-Nichols (UNLV) |

## Meeting Summary

The attendees participated in a 2-hour bike-riding tour of the UNLV campus with the goals of evaluating proposed bike routes and locations for bike parking and/or bike sharing facilities. A summary of the discussion follows:

### GENERAL DISCUSSION

- UNLV is in favor of having a pilot project as a first-step demonstration of improved bike facilities on campus. The group discussed possibly having one north-south, and one east-west route.
- Ron Floth described the best way to lock bikes by removing the front wheel (if it is a quick-release) and locking it together with the back wheel, the bike frame, and the bike rack. J.P. reinforced that security is the #1 deterrent for cyclists on campus and suggested that educating students on this could go a long way. This information could be distributed during student orientation and each bike parking facility could have a simple kiosk with images demonstrating this good bike locking method. The group agreed this would be beneficial.

- The group discussed removing existing wave bike racks and replacing these with racks having 2 points of contact on the bike. J.P. pointed out this was part of the draft recommendations proposed by the team.
- The group discussed consolidating bike parking near building entrances (e.g. Tonopah dorm has racks along sidewalk but would be better all in one place, Ham music bldg. has parking on the north side but would be better all near entrance). Bob said not more than 50 parking spots in front of buildings.
- Bob likes clustered covered bike parking areas - e.g. library in landscaping. He likes the ability to move covered parking areas in the future as campus needs change.
- Bike share could be subsidized with sponsorships. RTC could receive sponsorship donations to offset the cost of installation (not going thru UNLV would be simpler) RTC and UNLV would then have an agreement.
- The campus cameras do not have live review. It was suggested that signs could be posted indicating cameras are present to help bring attention to them and deter crime.
- Budgeting at UNLV - in Feb they look for projects to fund, have to use it or their budget is reduced for the following year.
- Ron and Kim discussed DG trails as an option to quickly put in a path and one that looks good.
- Ron stated that bike lockers are a great way to increase security and these have a variety of configurations that could fit into different spaces. J.P. agreed stating this was discussed during the UNLV comment meeting however UNLV is concerned with the aesthetics of bike lockers. He added that bike lockers may be presented and maintained well if they are sponsored by a local business, or perhaps decorated by a local artist such as has been done with utility boxes along Maryland Parkway.

BIKE TOUR DISCUSSION

- Starting out at the Student Union, the group discussed the benefits of bike parking near the front door. A location under the east stair was identified as a potential location for bike racks.
- The group biked north along proposed route NS08 (one of the campus “mall” areas). It was noted that the path was very wide and could possibly accommodate a dedicated bike lane on the inside.
- While on Cottage Grove (EW01), the group concurred with the recommendation that this road could be striped for bike lanes and would provide an important east-west connection for the north side of campus. Ron stated the center lanes are very wide and could probably be reduced. There will be 700 new beds at this location. The group wasn’t sure if the road is owned/maintained by UNLV or Clark County. J.P. stated he would identify owners of roads located within campus.

- Bob stated there will be some redesign at the area where Ham Hall and the flashlight is located, which would possibly address the elevation change there.
- The group reviewed the campus access road west of the Cottage Grove garage. There is high vehicle traffic here. J.P. suggested the group review the road east of the garage, which was identified as the proposed route NS05. This road is much nicer and more accommodating for cyclists. The roadway is divided by a tree-lined median and has sufficient space to add bike lanes. There is limited vehicle traffic, and it already includes good shading. Bob agreed this road would be a better cycling option.
- The group evaluated connections from NS05 where the road stops. This area was suggested to be a good location for bike parking and a bike share docking station. Bollards could be pulled out and a bike path painted to connect to the south west.
- Bob mentioned that the location west of Ham Hall is the site for a new engineering building. The pedestrian connections (north/south) between the Engineering Bldg and the future site may be redesigned/reconfigured when the new building is constructed.
- The group stopped in between the engineering building (TBE) and the food court plaza/arboretum and the grass field. J.P. mentioned the existing bike racks in front of the building. Bob stated that area directly in front of TBE is primarily for pedestrian use and they probably would not add more facilities for bike parking. However, he was open to using an area of the plaza for bike parking and/or a bike share station. The area could be reconfigured; however he suggests not moving any of the trees. J.P. agreed this area would be good considering the high amount of campus traffic and that the general campus area was highly recommended by university staff and students.
- The group rode further west toward the MPE building. Bob suggested trying a different route heading north that started in front of the MPE building. The path started as paved and changed to a compressed dirt path continuing north to NS01. The group had positive feedback on this suggested route – it was separated from pedestrians and vehicles, although carts use the path. The group discussed asphalt paving or perhaps upgrading the DG of the dirt path. Additionally, UNLV was open to making this a bike-only path.
- NS01 at the north is a relatively narrow road with a lot of vehicle traffic. Best opportunity here is adding sharrow markings to alert vehicle users that cyclists will also be using the road.

  The group rode toward NS03 and took this route south into campus. The route does not have lighting and there would be challenges due to limited space and mixing with vehicles and the parking lot area. Cathy felt this was an important route serving a direct connection from Flamingo Road to the core east-west mall area on campus. J.P. agreed and suggested that in the future, the parking lot to the west of the access road might be reconfigured to allow space for a bike facility on or adjacent to the street.

- Bob mentioned another smaller route between the Tennis Courts and the Natatorium from Harmon north toward the Lied Athletic Complex (LAC). It may be a good secondary route, which is used as a fire lane. The LAC would be a good location for bike share.
- The group rode along Harmon Ave heading east into campus. Bob mentioned that the north side will be redeveloped sometime in the future, but in the meantime there is little that can be done here. J.P. agreed stating that the road is narrow and any significant improvements would likely not be in the short-term phase. He suggested the road be marked with sharrows to alert vehicle users that cyclists will also be using the road.
- The group continued along Harmon Ave past the Library then turned south to NS06, one of the primary paths on campus. The group evaluated and identified a couple of locations good for bike share/bike parking along this corridor. Bob mentioned that the Dean would not likely want any significant biking infrastructure directly at the entrance of the Library. However, there is a landscaped area in front of the library that has sufficient space and could be converted to a nicely designed bike facility while still having landscaping. There was a second area a little farther south that was identified as a possibility as well.
- Continuing south, J.P. pointed out the strip landscaped area in front of the CBC buildings that could be converted. The group also discussed the possibility of placing dedicated bike lanes, such as a cycle track along this corridor. There would be challenges with enforcing this separation between pedestrians and cyclists, especially with all the cross-traffic occurring here. The group took note of the food trucks and other tents and tables that set up along this corridor.
- Continuing south again, the group visited an existing pavilion bus stop not being used near the Rec Center. The location is a primary entrance point from where students park. The group discussed a good opportunity for placing bike share next to an existing median separating traffic. Bollards could be placed around the facility for identification and protection. J.P. asked Ron if it was an issue not having any shading. Ron stated it would not be a significant issue since users can access the bikes very quickly, bikes are painted white, and any equipment degradation from the sun is covered in the maintenance costs.
- The group arrived near the dorms south of the Rec Center. Bob stated that those dorms aren't high density. The group then looked at grass areas near the basket ball courts, the volley ball courts and the dining commons. Bob mentioned this area is highly used and may be good for consideration.
- The final stop was at the UNLV Transit Center. The group observed the large quantity of bike racks, all but one were empty. The group agreed the transit center would be a good location for a bike share station. Additional discussions focused on a parking garage being constructed on the east side of Maryland Parkway. Visitors could park

there and pick up a bike share bike at the transit center. Signage directing visitors to the bike share station would be helpful.

SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

# Appendices - UNLV Campus Bicycle Plan

## 3B Bicycle and Pedestrian Counts

Prepared by National Data & Surveying Services

# SPENCER GREENWAY TRANSPORTATION TRAIL & UNLV CAMPUS PEDESTRIAN & BICYCLE COUNTS

**Project:** 16-8042 **City:** Las Vegas

## C1: CAMBRIDGE & FLAMINGO

*Thursday, May 5, 2016*

| TIME | NORTH LEG | | | SOUTH LEG | | | EAST LEG | | | WEST LEG | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes |
| **7:00** | 1 | 1 | 2 | 2 | 2 | 4 | 4 | 2 | 6 | 3 | 1 | 4 | 10 | 6 | 16 |
| **7:15** | 1 | 2 | 3 | 2 | 1 | 3 | 3 | 2 | 5 | 4 | 2 | 6 | 10 | 7 | 17 |
| **7:30** | 5 | 2 | 7 | 3 | 1 | 4 | 6 | 2 | 8 | 2 | 3 | 5 | 16 | 8 | 24 |
| **7:45** | 4 | 2 | 6 | 3 | 1 | 4 | 4 | 2 | 6 | 6 | 2 | 8 | 17 | 7 | 24 |
| **8:00** | 8 | 2 | 10 | 3 | 1 | 4 | 5 | 2 | 7 | 4 | 1 | 5 | 20 | 6 | 26 |
| **8:15** | 7 | 2 | 9 | 3 | 3 | 6 | 5 | 4 | 9 | 8 | 1 | 9 | 23 | 10 | 33 |
| **8:30** | 4 | 0 | 4 | 6 | 1 | 7 | 7 | 2 | 9 | 4 | 1 | 5 | 21 | 4 | 25 |
| **8:45** | 5 | 0 | 5 | 4 | 1 | 5 | 6 | 3 | 9 | 4 | 1 | 5 | 19 | 5 | 24 |
| **15:30** | 2 | 0 | 2 | 2 | 0 | 2 | 3 | 1 | 4 | 4 | 0 | 4 | 11 | 1 | 12 |
| **15:45** | 2 | 1 | 3 | 3 | 1 | 4 | 3 | 4 | 7 | 6 | 0 | 6 | 14 | 6 | 20 |
| **16:00** | 2 | 2 | 4 | 8 | 1 | 9 | 2 | 0 | 2 | 5 | 0 | 5 | 17 | 3 | 20 |
| **16:15** | 4 | 2 | 6 | 3 | 0 | 3 | 4 | 0 | 4 | 6 | 1 | 7 | 17 | 3 | 20 |
| **16:30** | 4 | 0 | 4 | 2 | 1 | 3 | 3 | 1 | 4 | 5 | 2 | 7 | 14 | 4 | 18 |
| **16:45** | 3 | 1 | 4 | 5 | 0 | 5 | 4 | 1 | 5 | 9 | 0 | 9 | 21 | 2 | 23 |
| **17:00** | 2 | 0 | 2 | 5 | 1 | 6 | 10 | 2 | 12 | 5 | 1 | 6 | 22 | 4 | 26 |
| **17:15** | 3 | 2 | 5 | 5 | 1 | 6 | 5 | 2 | 7 | 10 | 0 | 10 | 23 | 5 | 28 |
| *AM TOTAL* | *35* | *11* | *46* | *26* | *11* | *37* | *40* | *19* | *59* | *35* | *12* | *47* | *136* | *53* | 189 |
| *PM TOTAL* | *22* | *8* | *30* | *33* | *5* | *38* | *34* | *11* | *45* | *50* | *4* | *54* | *139* | *28* | 167 |
| ***TOTAL*** | ***57*** | ***19*** | ***76*** | ***59*** | ***16*** | ***75*** | ***74*** | ***30*** | ***104*** | ***85*** | ***16*** | ***101*** | ***275*** | ***81*** | ***356*** |

## C2: COTTAGE GROVE & MARYLAND PARKWAY

*Wednesday, May 4, 2016*

| TIME | NORTH LEG | | | SOUTH LEG | | | EAST LEG | | | WEST LEG | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes |
| **7:00** | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 0 | 3 | 1 | 5 | 6 | 4 | 6 | 10 |
| **7:15** | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 1 | 3 | 4 | 2 | 6 | 7 | 4 | 11 |
| **7:30** | 1 | 4 | 5 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 6 | 8 | 5 | 10 | 15 |
| **7:45** | 2 | 2 | 4 | 0 | 2 | 2 | 1 | 1 | 2 | 3 | 2 | 5 | 6 | 7 | 13 |
| **8:00** | 1 | 4 | 5 | 1 | 1 | 2 | 4 | 2 | 6 | 6 | 4 | 10 | 12 | 11 | 23 |
| **8:15** | 2 | 5 | 7 | 2 | 2 | 4 | 5 | 2 | 7 | 4 | 1 | 5 | 13 | 10 | 23 |
| **8:30** | 2 | 4 | 6 | 2 | 2 | 4 | 4 | 0 | 4 | 4 | 0 | 4 | 12 | 6 | 18 |
| **8:45** | 2 | 4 | 6 | 0 | 0 | 0 | 3 | 0 | 3 | 2 | 0 | 2 | 7 | 4 | 11 |
| **15:30** | 2 | 0 | 2 | 1 | 2 | 3 | 2 | 0 | 2 | 5 | 2 | 7 | 10 | 4 | 14 |
| **15:45** | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 4 | 3 | 7 | 6 | 3 | 9 |
| **16:00** | 1 | 0 | 1 | 3 | 1 | 4 | 5 | 3 | 8 | 4 | 2 | 6 | 13 | 6 | 19 |
| **16:15** | 0 | 0 | 0 | 2 | 0 | 2 | 7 | 0 | 7 | 5 | 0 | 5 | 14 | 0 | 14 |
| **16:30** | 0 | 0 | 0 | 1 | 0 | 1 | 5 | 3 | 8 | 2 | 2 | 4 | 8 | 5 | 13 |
| **16:45** | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 5 | 0 | 5 | 11 | 0 | 11 |
| **17:00** | 3 | 0 | 3 | 1 | 0 | 1 | 2 | 2 | 4 | 4 | 3 | 7 | 10 | 5 | 15 |
| **17:15** | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 2 | 6 | 3 | 0 | 3 | 8 | 2 | 10 |
| *AM TOTAL* | *10* | *24* | *34* | *6* | *8* | *14* | *24* | *6* | *30* | *26* | *20* | *46* | *66* | *58* | 124 |
| *PM TOTAL* | *8* | *0* | *8* | *11* | *3* | *14* | *29* | *10* | *39* | *32* | *12* | *44* | *80* | *25* | 105 |
| ***TOTAL*** | ***18*** | ***24*** | ***42*** | ***17*** | ***11*** | ***28*** | ***53*** | ***16*** | ***69*** | ***58*** | ***32*** | ***90*** | ***146*** | ***83*** | ***229*** |

Prepared by National Data & Surveying Services

# SPENCER GREENWAY TRANSPORTATION TRAIL & UNLV CAMPUS PEDESTRIAN & BICYCLE COUNTS

**Project:** 16-8042 **City:** Las Vegas

## C3: HARMON & MARYLAND PARKWAY

*Wednesday, May 4, 2016*

| TIME | NORTH LEG | | | SOUTH LEG | | | EAST LEG | | | WEST LEG | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes |
| **7:00** | 13 | 1 | 14 | 4 | 0 | 4 | 2 | 0 | 2 | 2 | 0 | 2 | 21 | 1 | 22 |
| **7:15** | 2 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 3 | 2 | 0 | 2 | 7 | 0 | 7 |
| **7:30** | 1 | 0 | 1 | 5 | 0 | 5 | 2 | 0 | 2 | 1 | 0 | 1 | 9 | 0 | 9 |
| **7:45** | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 4 | 5 | 0 | 5 |
| **8:00** | 3 | 0 | 3 | 1 | 0 | 1 | 1 | 2 | 3 | 1 | 0 | 1 | 6 | 2 | 8 |
| **8:15** | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 0 | 2 | 1 | 0 | 1 | 5 | 0 | 5 |
| **8:30** | 1 | 0 | 1 | 3 | 1 | 4 | 1 | 0 | 1 | 1 | 1 | 2 | 6 | 2 | 8 |
| **8:45** | 2 | 0 | 2 | 2 | 0 | 2 | 1 | 0 | 1 | 2 | 0 | 2 | 7 | 0 | 7 |
| **15:30** | 17 | 1 | 18 | 22 | 0 | 22 | 9 | 0 | 9 | 0 | 1 | 1 | 48 | 2 | 50 |
| **15:45** | 28 | 1 | 29 | 16 | 1 | 17 | 9 | 0 | 9 | 1 | 0 | 1 | 54 | 2 | 56 |
| **16:00** | 6 | 1 | 7 | 15 | 1 | 16 | 7 | 4 | 11 | 1 | 0 | 1 | 29 | 6 | 35 |
| **16:15** | 21 | 2 | 23 | 6 | 0 | 6 | 3 | 0 | 3 | 9 | 0 | 9 | 39 | 2 | 41 |
| **16:30** | 17 | 1 | 18 | 6 | 0 | 6 | 15 | 1 | 16 | 3 | 0 | 3 | 41 | 2 | 43 |
| **16:45** | 20 | 1 | 21 | 5 | 0 | 5 | 19 | 0 | 19 | 5 | 0 | 5 | 49 | 1 | 50 |
| **17:00** | 13 | 0 | 13 | 6 | 0 | 6 | 8 | 0 | 8 | 2 | 0 | 2 | 29 | 0 | 29 |
| **17:15** | 10 | 1 | 11 | 1 | 0 | 1 | 4 | 0 | 4 | 0 | 0 | 0 | 15 | 1 | 16 |
| *AM TOTAL* | *23* | *1* | *24* | *17* | *1* | *18* | *12* | *2* | *14* | *14* | *1* | *15* | *66* | *5* | 71 |
| *PM TOTAL* | *132* | *8* | *140* | *77* | *2* | *79* | *74* | *5* | *79* | *21* | *1* | *22* | *304* | *16* | 320 |
| ***TOTAL*** | ***155*** | ***9*** | ***164*** | ***94*** | ***3*** | ***97*** | ***86*** | ***7*** | ***93*** | ***35*** | ***2*** | ***37*** | ***370*** | ***21*** | ***391*** |

## C4: UNIVERSITY & MARYLAND PARKWAY

*Wednesday, May 4, 2016*

| TIME | NORTH LEG | | | SOUTH LEG | | | EAST LEG | | | WEST LEG | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes |
| **7:00** | 5 | 0 | 5 | 3 | 1 | 4 | 2 | 0 | 2 | 0 | 1 | 1 | 10 | 2 | 12 |
| **7:15** | 3 | 0 | 3 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 1 | 1 | 5 | 2 | 7 |
| **7:30** | 2 | 1 | 3 | 4 | 1 | 5 | 2 | 0 | 2 | 0 | 0 | 0 | 8 | 2 | 10 |
| **7:45** | 5 | 1 | 6 | 4 | 1 | 5 | 3 | 3 | 6 | 4 | 3 | 7 | 16 | 8 | 24 |
| **8:00** | 3 | 6 | 9 | 2 | 0 | 2 | 3 | 0 | 3 | 0 | 0 | 0 | 8 | 6 | 14 |
| **8:15** | 3 | 0 | 3 | 2 | 1 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 5 | 2 | 7 |
| **8:30** | 6 | 0 | 6 | 3 | 0 | 3 | 3 | 0 | 3 | 0 | 0 | 0 | 12 | 0 | 12 |
| **8:45** | 4 | 0 | 4 | 0 | 2 | 2 | 4 | 0 | 4 | 0 | 0 | 0 | 8 | 2 | 10 |
| **15:30** | 15 | 0 | 15 | 5 | 0 | 5 | 12 | 0 | 12 | 7 | 3 | 10 | 39 | 3 | 42 |
| **15:45** | 12 | 0 | 12 | 12 | 0 | 12 | 13 | 0 | 13 | 10 | 1 | 11 | 47 | 1 | 48 |
| **16:00** | 5 | 0 | 5 | 6 | 0 | 6 | 10 | 1 | 11 | 9 | 0 | 9 | 30 | 1 | 31 |
| **16:15** | 4 | 1 | 5 | 10 | 1 | 11 | 16 | 3 | 19 | 8 | 2 | 10 | 38 | 7 | 45 |
| **16:30** | 12 | 0 | 12 | 7 | 1 | 8 | 10 | 2 | 12 | 4 | 0 | 4 | 33 | 3 | 36 |
| **16:45** | 14 | 1 | 15 | 12 | 0 | 12 | 5 | 1 | 6 | 5 | 0 | 5 | 36 | 2 | 38 |
| **17:00** | 15 | 0 | 15 | 10 | 2 | 12 | 11 | 1 | 12 | 3 | 0 | 3 | 39 | 3 | 42 |
| **17:15** | 12 | 0 | 12 | 6 | 1 | 7 | 9 | 0 | 9 | 2 | 0 | 2 | 29 | 1 | 30 |
| *AM TOTAL* | *31* | *8* | *39* | *20* | *7* | *27* | *17* | *4* | *21* | *4* | *5* | *9* | *72* | *24* | 96 |
| *PM TOTAL* | *89* | *2* | *91* | *68* | *5* | *73* | *86* | *8* | *94* | *48* | *6* | *54* | *291* | *21* | 312 |
| ***TOTAL*** | ***120*** | ***10*** | ***130*** | ***88*** | ***12*** | ***100*** | ***103*** | ***12*** | ***115*** | ***52*** | ***11*** | ***63*** | ***363*** | ***45*** | ***408*** |

Prepared by National Data & Surveying Services

# SPENCER GREENWAY TRANSPORTATION TRAIL & UNLV CAMPUS PEDESTRIAN & BICYCLE COUNTS

**Project:** 16-8042 **City:** Las Vegas

## C5: WILBUR & TROPICANA

*Thursday, May 5, 2016*

| TIME | NORTH LEG | | | SOUTH LEG | | | EAST LEG | | | WEST LEG | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes |
| **7:00** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **7:15** | 3 | 1 | 4 | 5 | 0 | 5 | 2 | 1 | 3 | 2 | 0 | 2 | 12 | 2 | 14 |
| **7:30** | 2 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 3 | 3 | 0 | 3 | 8 | 0 | 8 |
| **7:45** | 2 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| **8:00** | 9 | 1 | 10 | 3 | 1 | 4 | 5 | 0 | 5 | 4 | 2 | 6 | 21 | 4 | 25 |
| **8:15** | 14 | 1 | 15 | 2 | 0 | 2 | 0 | 0 | 0 | 4 | 0 | 4 | 20 | 1 | 21 |
| **8:30** | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 1 | 4 | 0 | 4 |
| **8:45** | 11 | 0 | 11 | 6 | 0 | 6 | 1 | 0 | 1 | 4 | 0 | 4 | 22 | 0 | 22 |
| **15:30** | 7 | 1 | 8 | 2 | 1 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 10 | 2 | 12 |
| **15:45** | 3 | 2 | 5 | 3 | 1 | 4 | 3 | 0 | 3 | 3 | 0 | 3 | 12 | 3 | 15 |
| **16:00** | 5 | 1 | 6 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 0 | 2 | 9 | 3 | 12 |
| **16:15** | 2 | 0 | 2 | 2 | 0 | 2 | 7 | 0 | 7 | 0 | 0 | 0 | 11 | 0 | 11 |
| **16:30** | 3 | 1 | 4 | 1 | 3 | 4 | 1 | 1 | 2 | 0 | 1 | 1 | 5 | 6 | 11 |
| **16:45** | 4 | 1 | 5 | 2 | 2 | 4 | 2 | 0 | 2 | 1 | 0 | 1 | 9 | 3 | 12 |
| **17:00** | 1 | 2 | 3 | 3 | 2 | 5 | 3 | 4 | 7 | 2 | 2 | 4 | 9 | 10 | 19 |
| **17:15** | 1 | 1 | 2 | 2 | 1 | 3 | 5 | 3 | 8 | 1 | 1 | 2 | 9 | 6 | 15 |
| *AM TOTAL* | *42* | *5* | *47* | *16* | *1* | *17* | *13* | *1* | *14* | *18* | *2* | *20* | *89* | *9* | 98 |
| *PM TOTAL* | *26* | *9* | *35* | *16* | *11* | *27* | *23* | *9* | *32* | *9* | *4* | *13* | *74* | *33* | 107 |
| ***TOTAL*** | ***68*** | ***14*** | ***82*** | ***32*** | ***12*** | ***44*** | ***36*** | ***10*** | ***46*** | ***27*** | ***6*** | ***33*** | ***163*** | ***42*** | ***205*** |

## C6: MARYLAND & TROPICANA

*Wednesday, May 4, 2016*

| TIME | NORTH LEG | | | SOUTH LEG | | | EAST LEG | | | WEST LEG | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes |
| **7:00** | 9 | 0 | 9 | 3 | 0 | 3 | 4 | 0 | 4 | 6 | 0 | 6 | 22 | 0 | 22 |
| **7:15** | 3 | 0 | 3 | 4 | 0 | 4 | 5 | 0 | 5 | 2 | 0 | 2 | 14 | 0 | 14 |
| **7:30** | 3 | 1 | 4 | 1 | 3 | 4 | 2 | 0 | 2 | 5 | 1 | 6 | 11 | 5 | 16 |
| **7:45** | 5 | 2 | 7 | 3 | 3 | 6 | 2 | 3 | 5 | 3 | 0 | 3 | 13 | 8 | 21 |
| **8:00** | 9 | 1 | 10 | 3 | 8 | 11 | 5 | 0 | 5 | 5 | 0 | 5 | 22 | 9 | 31 |
| **8:15** | 3 | 2 | 5 | 2 | 3 | 5 | 2 | 0 | 2 | 1 | 1 | 2 | 8 | 6 | 14 |
| **8:30** | 11 | 0 | 11 | 7 | 1 | 8 | 5 | 1 | 6 | 8 | 1 | 9 | 31 | 3 | 34 |
| **8:45** | 13 | 0 | 13 | 8 | 4 | 12 | 6 | 1 | 7 | 6 | 1 | 7 | 33 | 6 | 39 |
| **15:30** | 13 | 2 | 15 | 7 | 5 | 12 | 3 | 0 | 3 | 10 | 0 | 10 | 33 | 7 | 40 |
| **15:45** | 3 | 2 | 5 | 15 | 2 | 17 | 11 | 2 | 13 | 7 | 4 | 11 | 36 | 10 | 46 |
| **16:00** | 8 | 1 | 9 | 8 | 0 | 8 | 15 | 0 | 15 | 8 | 2 | 10 | 39 | 3 | 42 |
| **16:15** | 16 | 1 | 17 | 8 | 0 | 8 | 15 | 0 | 15 | 8 | 0 | 8 | 47 | 1 | 48 |
| **16:30** | 19 | 1 | 20 | 9 | 6 | 15 | 11 | 3 | 14 | 9 | 0 | 9 | 48 | 10 | 58 |
| **16:45** | 10 | 0 | 10 | 5 | 0 | 5 | 7 | 0 | 7 | 5 | 0 | 5 | 27 | 0 | 27 |
| **17:00** | 17 | 0 | 17 | 26 | 0 | 26 | 16 | 2 | 18 | 10 | 2 | 12 | 69 | 4 | 73 |
| **17:15** | 10 | 2 | 12 | 11 | 2 | 13 | 23 | 4 | 27 | 9 | 1 | 10 | 53 | 9 | 62 |
| *AM TOTAL* | *56* | *6* | *62* | *31* | *22* | *53* | *31* | *5* | *36* | *36* | *4* | *40* | *154* | *37* | 191 |
| *PM TOTAL* | *96* | *9* | *105* | *89* | *15* | *104* | *101* | *11* | *112* | *66* | *9* | *75* | *352* | *44* | 396 |
| ***TOTAL*** | ***152*** | ***15*** | ***167*** | ***120*** | ***37*** | ***157*** | ***132*** | ***16*** | ***148*** | ***102*** | ***13*** | ***115*** | ***506*** | ***81*** | ***587*** |

Prepared by National Data & Surveying Services

# SPENCER GREENWAY TRANSPORTATION TRAIL & UNLV CAMPUS PEDESTRIAN & BICYCLE COUNTS

**Project:** 16-8042 **City:** Las Vegas

## C7: SWENSON & FLAMINGO

*Thursday, May 5, 2016*

| TIME | NORTH LEG | | | SOUTH LEG | | | EAST LEG | | | WEST LEG | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes |
| **7:00** | 2 | 0 | 2 | 1 | 0 | 1 | 2 | 0 | 2 | 2 | 0 | 2 | 7 | 0 | 7 |
| **7:15** | 3 | 0 | 3 | 2 | 0 | 2 | 1 | 0 | 1 | 2 | 0 | 2 | 8 | 0 | 8 |
| **7:30** | 6 | 2 | 8 | 4 | 1 | 5 | 4 | 0 | 4 | 5 | 0 | 5 | 19 | 3 | 22 |
| **7:45** | 13 | 1 | 14 | 7 | 2 | 9 | 5 | 1 | 6 | 9 | 0 | 9 | 34 | 4 | 38 |
| **8:00** | 12 | 1 | 13 | 5 | 0 | 5 | 4 | 2 | 6 | 4 | 2 | 6 | 25 | 5 | 30 |
| **8:15** | 8 | 2 | 10 | 1 | 0 | 1 | 1 | 3 | 4 | 6 | 0 | 6 | 16 | 5 | 21 |
| **8:30** | 8 | 0 | 8 | 4 | 1 | 5 | 6 | 0 | 6 | 4 | 0 | 4 | 22 | 1 | 23 |
| **8:45** | 7 | 0 | 7 | 6 | 2 | 8 | 1 | 1 | 2 | 7 | 0 | 7 | 21 | 3 | 24 |
| **15:30** | 14 | 0 | 14 | 3 | 0 | 3 | 2 | 0 | 2 | 6 | 0 | 6 | 25 | 0 | 25 |
| **15:45** | 7 | 2 | 9 | 2 | 1 | 3 | 1 | 3 | 4 | 2 | 2 | 4 | 12 | 8 | 20 |
| **16:00** | 12 | 2 | 14 | 10 | 5 | 15 | 3 | 3 | 6 | 13 | 1 | 14 | 38 | 11 | 49 |
| **16:15** | 30 | 4 | 34 | 7 | 0 | 7 | 8 | 1 | 9 | 8 | 3 | 11 | 53 | 8 | 61 |
| **16:30** | 13 | 1 | 14 | 10 | 0 | 10 | 10 | 1 | 11 | 3 | 3 | 6 | 36 | 5 | 41 |
| **16:45** | 25 | 1 | 26 | 12 | 2 | 14 | 6 | 2 | 8 | 8 | 5 | 13 | 51 | 10 | 61 |
| **17:00** | 23 | 1 | 24 | 6 | 1 | 7 | 4 | 0 | 4 | 10 | 1 | 11 | 43 | 3 | 46 |
| **17:15** | 22 | 2 | 24 | 5 | 0 | 5 | 5 | 0 | 5 | 7 | 0 | 7 | 39 | 2 | 41 |
| *AM TOTAL* | *59* | *6* | *65* | *30* | *6* | *36* | *24* | *7* | *31* | *39* | *2* | *41* | *152* | *21* | 173 |
| *PM TOTAL* | *146* | *13* | *159* | *55* | *9* | *64* | *39* | *10* | *49* | *57* | *15* | *72* | *297* | *47* | 344 |
| ***TOTAL*** | ***205*** | ***19*** | ***224*** | ***85*** | ***15*** | ***100*** | ***63*** | ***17*** | ***80*** | ***96*** | ***17*** | ***113*** | ***449*** | ***68*** | ***517*** |

## C8: MARYLAND & FLAMINGO

*Wednesday, May 4, 2016*

| TIME | NORTH LEG | | | SOUTH LEG | | | EAST LEG | | | WEST LEG | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes |
| **7:00** | 9 | 1 | 10 | 6 | 1 | 7 | 8 | 0 | 8 | 6 | 3 | 9 | 29 | 5 | 34 |
| **7:15** | 10 | 0 | 10 | 4 | 0 | 4 | 4 | 0 | 4 | 7 | 1 | 8 | 25 | 1 | 26 |
| **7:30** | 11 | 1 | 12 | 5 | 0 | 5 | 8 | 3 | 11 | 1 | 0 | 1 | 25 | 4 | 29 |
| **7:45** | 8 | 0 | 8 | 11 | 1 | 12 | 6 | 2 | 8 | 7 | 1 | 8 | 32 | 4 | 36 |
| **8:00** | 11 | 0 | 11 | 14 | 0 | 14 | 9 | 2 | 11 | 10 | 1 | 11 | 44 | 3 | 47 |
| **8:15** | 15 | 0 | 15 | 4 | 1 | 5 | 8 | 0 | 8 | 2 | 0 | 2 | 29 | 1 | 30 |
| **8:30** | 5 | 0 | 5 | 5 | 0 | 5 | 8 | 0 | 8 | 2 | 0 | 2 | 20 | 0 | 20 |
| **8:45** | 10 | 1 | 11 | 11 | 1 | 12 | 14 | 1 | 15 | 7 | 1 | 8 | 42 | 4 | 46 |
| **15:30** | 45 | 8 | 53 | 17 | 0 | 17 | 45 | 0 | 45 | 13 | 1 | 14 | 120 | 9 | 129 |
| **15:45** | 41 | 8 | 49 | 23 | 2 | 25 | 27 | 0 | 27 | 18 | 4 | 22 | 109 | 14 | 123 |
| **16:00** | 30 | 1 | 31 | 28 | 0 | 28 | 29 | 0 | 29 | 19 | 1 | 20 | 106 | 2 | 108 |
| **16:15** | 30 | 8 | 38 | 20 | 0 | 20 | 20 | 2 | 22 | 23 | 0 | 23 | 93 | 10 | 103 |
| **16:30** | 26 | 2 | 28 | 27 | 0 | 27 | 22 | 0 | 22 | 20 | 0 | 20 | 95 | 2 | 97 |
| **16:45** | 27 | 3 | 30 | 33 | 0 | 33 | 21 | 1 | 22 | 12 | 0 | 12 | 93 | 4 | 97 |
| **17:00** | 33 | 4 | 37 | 23 | 0 | 23 | 32 | 0 | 32 | 29 | 0 | 29 | 117 | 4 | 121 |
| **17:15** | 34 | 7 | 41 | 27 | 0 | 27 | 24 | 0 | 24 | 12 | 0 | 12 | 97 | 7 | 104 |
| *AM TOTAL* | *79* | *3* | *82* | *60* | *4* | *64* | *65* | *8* | *73* | *42* | *7* | *49* | *246* | *22* | 268 |
| *PM TOTAL* | *266* | *41* | *307* | *198* | *2* | *200* | *220* | *3* | *223* | *146* | *6* | *152* | *830* | *52* | 882 |
| ***TOTAL*** | ***345*** | ***44*** | ***389*** | ***258*** | ***6*** | ***264*** | ***285*** | ***11*** | ***296*** | ***188*** | ***13*** | ***201*** | ***1076*** | ***74*** | ***1150*** |

Prepared by National Data & Surveying Services

# SPENCER GREENWAY TRANSPORTATION TRAIL & UNLV CAMPUS PEDESTRIAN & BICYCLE COUNTS

**Project:** 16-8042 **City:** Las Vegas

## C9: HARMON & SWENSON

*Thursday, May 5, 2016*

| TIME | NORTH LEG | | | SOUTH LEG | | | EAST LEG | | | WEST LEG | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes |
| **7:00** | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| **7:15** | 2 | 0 | 2 | 1 | 0 | 1 | 1 | 2 | 3 | 0 | 0 | 0 | 4 | 2 | 6 |
| **7:30** | 7 | 1 | 8 | 8 | 1 | 9 | 13 | 0 | 13 | 0 | 0 | 0 | 28 | 2 | 30 |
| **7:45** | 7 | 0 | 7 | 6 | 1 | 7 | 4 | 2 | 6 | 0 | 0 | 0 | 17 | 3 | 20 |
| **8:00** | 6 | 1 | 7 | 7 | 2 | 9 | 10 | 0 | 10 | 0 | 0 | 0 | 23 | 3 | 26 |
| **8:15** | 6 | 2 | 8 | 5 | 0 | 5 | 9 | 1 | 10 | 1 | 0 | 1 | 21 | 3 | 24 |
| **8:30** | 4 | 1 | 5 | 5 | 0 | 5 | 8 | 0 | 8 | 1 | 0 | 1 | 18 | 1 | 19 |
| **8:45** | 4 | 0 | 4 | 7 | 0 | 7 | 1 | 1 | 2 | 0 | 0 | 0 | 12 | 1 | 13 |
| **15:30** | 1 | 0 | 1 | 0 | 3 | 3 | 2 | 0 | 2 | 0 | 0 | 0 | 3 | 3 | 6 |
| **15:45** | 4 | 0 | 4 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 |
| **16:00** | 6 | 2 | 8 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 2 | 11 |
| **16:15** | 2 | 1 | 3 | 12 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 1 | 15 |
| **16:30** | 7 | 2 | 9 | 1 | 0 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 9 | 3 | 12 |
| **16:45** | 5 | 1 | 6 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 9 |
| **17:00** | 6 | 0 | 6 | 0 | 6 | 6 | 3 | 0 | 3 | 0 | 0 | 0 | 9 | 6 | 15 |
| **17:15** | 9 | 1 | 10 | 3 | 1 | 4 | 5 | 1 | 6 | 0 | 0 | 0 | 17 | 3 | 20 |
| *AM TOTAL* | *36* | *8* | *44* | *39* | *4* | *43* | *46* | *6* | *52* | *2* | *0* | *2* | *123* | *18* | 141 |
| *PM TOTAL* | *40* | *7* | *47* | *24* | *10* | *34* | *11* | *2* | *13* | *0* | *0* | *0* | *75* | *19* | 94 |
| ***TOTAL*** | ***76*** | ***15*** | ***91*** | ***63*** | ***14*** | ***77*** | ***57*** | ***8*** | ***65*** | ***2*** | ***0*** | ***2*** | ***198*** | ***37*** | ***235*** |

## C10: DRIVEWAY & SWENSON

*Thursday, May 5, 2016*

| TIME | NORTH LEG | | | SOUTH LEG | | | EAST LEG | | | WEST LEG | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes | Peds | Bikes | Peds & Bikes |
| **7:00** | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| **7:15** | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| **7:30** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **7:45** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **8:00** | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 | 0 | 3 |
| **8:15** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **8:30** | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| **8:45** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **15:30** | 2 | 1 | 3 | 2 | 0 | 2 | 2 | 0 | 2 | 0 | 0 | 0 | 6 | 1 | 7 |
| **15:45** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **16:00** | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| **16:15** | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 2 |
| **16:30** | 2 | 0 | 2 | 1 | 2 | 3 | 0 | 1 | 1 | 1 | 0 | 1 | 4 | 3 | 7 |
| **16:45** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **17:00** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **17:15** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *AM TOTAL* | *1* | *0* | *1* | *2* | *0* | *2* | *3* | *0* | *3* | *2* | *0* | *2* | *8* | *0* | 8 |
| *PM TOTAL* | *5* | *1* | *6* | *4* | *2* | *6* | *2* | *1* | *3* | *2* | *0* | *2* | *13* | *4* | 17 |
| ***TOTAL*** | ***6*** | ***1*** | ***7*** | ***6*** | ***2*** | ***8*** | ***5*** | ***1*** | ***6*** | ***4*** | ***0*** | ***4*** | ***21*** | ***4*** | ***25*** |

SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

# Appendices - UNLV Campus Bicycle Plan

## 3C Summary of Implementation Plan Recommendations

**UNLV Campus Bike Plan Implementation**

*One-Page Summary of Recommendations and Cost Considerations*

| NEAR-TERM PROGRAM (3 Year Goals) | | |
|---|---|---|
| **ROUTES** | **SUPPORT FACILITIES** | **OTHER RECOMMENDATIONS** |
| NS06, NS07, NS08, NS09, NS10. EW01, EW03, Ew05, EW06, EW07. | Implement a pilot program of some or all components from the near-term program. Consider bike plan components as the new Harmon Ave/Maryland Pkwy entrance configuration is developed. Evaluate a full bike facility connection between proposed routes NS13 and NS14. | Develop a Campus Bicycle Advisory Committee. UNLV stated that a group had started to meet previously and they plan to reconvene this group now that the study is complete. |
| | Integrate bike registration into existing Student Union information center. | Develop a funding plan for implementing phases through to the 10-year plan. Identify funding for a pilot program. |
| | Upgrade bike racks to AASHTO approved types. | Submit an application to the League of American Bicyclists for UNLV to become a Bicycle Friendly University. |
| | Select facility types for major bike parking areas. | The campus bike map, annual bike event calendar, and the campus bike policy (as it develops) should be included as part of new student registration. Include educational information such proper methods for locking users bikes. |
| | Develop complete design, cost estimates and specifications. | Continue to promote bike culture on campus. The report lists examples of ideas from other notable universities. Reference the appendix which includes links to notable university bike plans with many more ideas and details on this item. |
| | Implement major bike parking area and service station at Lied Library. | Develop a comprehensive Campus Wayfinding Standards and Policy (to include bike system signage). |
| | Partnership with RTC for bike share vendor contracting. Install six new bike share stations. | Begin an annual campus bike count program. Establish and have an performance measures evaluation system in place even before implementing the Pilot Program. Reference the appendix which includes links to notable university bike plans with many more ideas and details on this item.Complete program evaluation of performance measures. Based on lessons learned, refine current program and plans for expansion. |
| | | Consider establishing a policy that gives priority to pedestrians and cyclists over vehicles such as maintenance fleet or golf carts. |
| **LONG-TERM PROGRAM (10 Year Goals)** | | |
| **ROUTES** | **SUPPORT FACILITIES** | **OTHER RECOMMENDATIONS** |
| NS01, NS02, NS03, NS04, NS05, NS11, NS12, NS13, NS14. EW02, EW04, EW08. | Implement all components of full plan, or refined plan, depending on evaluation. | Continue to advance all recommendations made above for the near-term plan. Target Platinum Status as a Bicycle Friendly University for the 10-year plan. |
| | Integrate bike registration into multiple key locations on campus. Add a complete bike hub at the Trasit Center. | |
| | Install bike racks at all campus buildings. | |
| | Select facility types for additional major bike parking areas.Develop complete design, cost estimates and specifications. | |
| | Implement major bike parking area and service stations at:<br>Lied Athletic Center<br>Engineering buildings<br>Between dorms and Rec Center<br>Classroom Building Complex<br>Student Union | |
| | Expand bike share system with approximately five new stations. | |

| Improvement | Unit Cost (general estimate, all costs vary depending on product) |
|---|---|
| Shared Lane or Bike Markings | $300 EA |
| Bike Lanes Markings | $1.75 per LF |
| Speed bump | $1500 EA |
| Asphalt Path (10-foot wide) | $33 per LF |
| Concrete Sidewalk (4-inch thick) | $30 per SY |
| Painted Dedicated Lanes (5-foot wide) | $7.50 per LF |
| Wheeling Ramp | $5000 EA |
| Bike Rack | $100 to $300 |
| Bike Corral | $500-$1000 EA |
| Bike Lockers | $1000 to $3000 EA Locker |
| Bike Rack with Shelter | $1500-$5000 EA, provide specs to vendors for quote |
| Bike Parking Cage | $5000+, provide specs to vendors for quote |
| Bike Enclosed Facility | $10,000+, provide specs to vendors for quote |
| Bike Share Station | $40,000 EA Station |
| Bike Service Station | $350-$1000 EA |
| Wayfinding Signage | $300 EA |

**Other Cost Considerations:**

*Costs do not include and removals, other traffic calming types, regulatory signage, landscaping, electrical connections, lighting enhancements, signals, reconfiguration or widening of paths or intersections, engineering, construction management, maintenance, operation and other items not listed above that will need to be identified and provided during the design phase.*

SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

# Appendices - UNLV Campus Bicycle Plan

## 3D Links to Notable University Campus Bike Plans

# SPENCER GREENWAY TRAIL & UNLV CAMPUS BIKE PLAN

## Links to Notable University Campus Bike Plans

### Platinum-Level Bicycle Friendly Universities

Stanford University
https://transportation.stanford.edu/bicycle

University of California, Davis
http://taps.ucdavis.edu/bicycle

Colorado State University
http://bicycle.colostate.edu/
https://www.fm.colostate.edu/files/forms/BikeMasterPlan_2014.pdf

University of Minnesota, Twin Cities
http://www.ci.minneapolis.mn.us/www/groups/public/@publicworks/documents/webcontent/convert_275983.pdf

Portland State University
https://www.pdx.edu/campus-planning/sites/www.pdx.edu.campus-planning/files/PortlandStateUniversity_BicycleTransportationPlan_March2011_ScreenRes.pdf

### Other Notable Campus Bike Programs

University of North Carolina – Chapel Hill
http://move.unc.edu/bike/bike-plan/

Columbia University
http://transportation.columbia.edu/bike-services-columbia

The University of Texas – Austin
http://www.pedbikeinfo.org/pdf/PlanDesign_SamplePlans_Local_Austin2009.pdf